



Explore the galaxy with Disney's new
Star Wars: Galactic Starcruiser



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The art of placemaking

Judith Rubin,
Editor



It is such a pleasure to be able to travel again and on a recent trip, I did some catch-up with Universal parks in Orlando and animal attractions in Tampa.

At Universal Studios Florida and Universal's Islands of Adventure, my priorities were The Bourne Stuntacular, Hogwarts Express and The Wizarding World of Harry Potter - Diagon Alley. All received Thea Awards within the past few years. These state-of-the-art adventures set a new standard for how to bring an IP to life using media, the built environment and live action — stoking high levels of throughput and per cap spending.

Of course, Stuntacular is a short show, while at Diagon Alley you could hang out all day long. It's placemaking at its best — in this case, a Harry Potter-themed bubble, loaded with options for the here-and-now you invent.

Placemaking doesn't have to involve a licensed IP. Zoo Tampa is simply a great day and clearly a local favorite. It has an inviting, richly landscaped strolling environment, plenty of F&B options, and a strong annual pass program. Habitats are thoughtfully designed for animal health, enrichment and the promotion of education, conservation and environmental awareness.

On Tampa Bay, Clearwater Marine Aquarium (CMA) has opened its grand, new four-story facility. It launched mid-pandemic, so this extensive, beautifully executed upgrade has not received the degree of attention that should have been its due. The scale of its new habitats and viewing portals provide excellent facilities for the animals with stunning, monumental views for visitors while supporting the mission of education, conservation and rehabilitation. CMA has a hospitality partnership with a nearby beachfront hotel named for Winter, the rescue dolphin with a prosthetic tail who captured the hearts of the public. Winter recently passed away and a coming VR experience at CMA will allow guests to go on virtual swims with her.

I'm inspired by and proud of this outstanding work by our industry.

Judith helps drive content to serve the attractions industry, fostering professional connections, business development and the meaningful exchange of information. She has been contributing to InPark since 2005 and became editor in 2010. Follow on Twitter @JudithRubin.



Jordan Zauha, News Editor

Jordan is a freelance writer and narrative designer in the themed entertainment industry. He is a member of the inaugural cohort of the Theatre MFA - Themed Experience program at the University of Central Florida, a NextGen member of the Themed Entertainment Association (TEA) and an associate member of the Themed Experience & Attractions Academic Society (TEAAS).

Back on the road

Martin Palicki,
Publisher



If there was one thing everyone agreed about at last November's IAAPA Expo, it was that it was great to see one another in person again. Aside from being reassured that the world is still spinning and business is happening, it felt good to reconnect with friends and colleagues. By most accounts, it seems like we'll be doing more of that this year. Although sadly IAAPA Expo Asia in Hong Kong had to cancel due to uncertainties with travel restrictions in that region, other events are moving full steam ahead — and InPark will be on hand to cover them as well as distribute copies of this issue of the magazine.

Attendees at the TEA Summit in Anaheim (April 21-22) will each receive a copy of InPark as they listen to Thea Award recipients share their stories and learn about the event's focus: "Are We There Yet? Refocusing and Preparing for What's Next." The weekend is topped off with the formal Thea Awards Gala on April 23.

The rescheduled ISE event takes place in Barcelona (May 10-13), followed by InfoComm in Las Vegas (June 8-10). Both events showcase the latest in AV technology, and both will have InPark issues and crew on site.

Finally, this issue will also be distributed at Licensing Expo, also in Las Vegas (May 24-26). Our partnership with the event organizers makes great sense, especially this year as the Expo will be focused on the LBE market. It's a great opportunity for our industry to better understand the branding and IP space and share with their leaders everything themed entertainment can bring to the table.

If you are in need of something to listen to while traveling to these meetings, subscribe and download InPark Tracks. Our podcast features insightful interviews, project deep dives and more. It's available wherever you listen to podcasts. I look forward to seeing you at these events — with more to come!

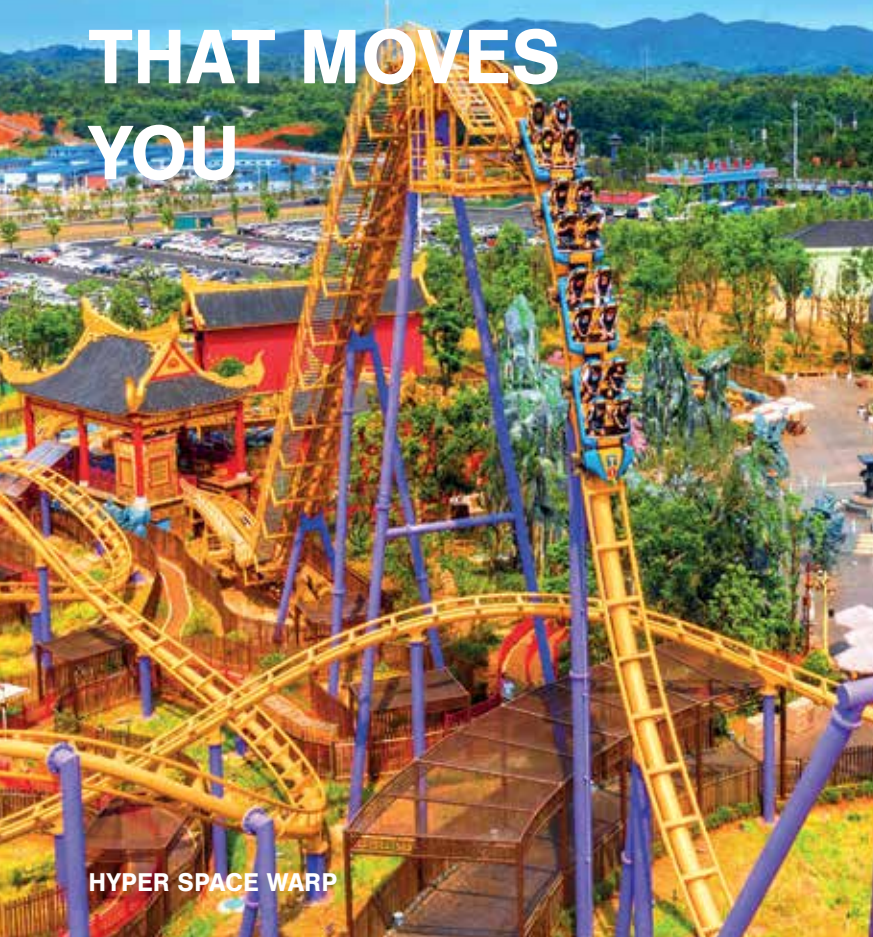
Martin founded InPark in 2004, combining years of experience in themed entertainment with a passion for writing and design.



Joe Kleiman, Senior Correspondent

Raised in San Diego on theme parks, zoos and IMAX films, Joe would expand his childhood loves into two decades as a projectionist and theater director within the giant screen industry. In addition to his work in commercial and museum operations, Joe has volunteered his time to animal husbandry at leading facilities in California and Texas and has played a leading management role for a number of performing arts companies. Joe has been news editor at InPark Magazine since 2011, becoming the publication's senior correspondent in 2021. His blog, ThemedReality.com takes an unconventional look at the attractions industry. Follow on Twitter @ThemesRenewed.

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Exciting, innovative and diverse

Hasbro's Matt Proulx talks
about brands and LBE

interview by David Edmonds

From theme park rides to life-sized board game experiences, physical action zones, family entertainment centers (FECs) and even branded interactive hotels, Hasbro has been leading the charge toward new genres of location-based entertainment (LBE) experiences utilizing their library of beloved brands.

With Licensing Expo 2022 soon to convene in Las Vegas, InPark contributor David Edmonds spoke to Matt Proulx, Vice President, Location Based Entertainment, Hasbro, to discuss the creation of new experiences and the future of branded LBE.

Concept art for Monopoly Lifesized
All photos courtesy of Hasbro



**What is your favorite
Hasbro experience that has
opened so far?**

It's so hard to pick just one! Our team's goal from day one was to innovate the LBE space and drive our brands to new heights by creating amazing world-class experiences with best-in-class partners.



Matt Proulx

Our global rollout to date includes the evolution of our Universal Studios Transformers experience at Universal Studios parks in Hollywood, Orlando and Singapore, as well as Transformers Metrobase (a dedicated land) at Universal Studios Beijing. Also, the opening of our first ever NERF FEC in Singapore called NAX (Nerf Action Xperience).

There are also our Monopoly Lifesized Experience (London), our first dedicated Peppa Pig Theme Park (Orlando), our Monopoly Dreams FEC experience (Hong Kong), our PJ Masks Land at Leolandia (Italy), and our Clue escape rooms with Breakout Games, among a whole host of other amazing experiences that have been launched over the past few years.

What about new directions? Where do you see branded experiences going?

Our goal has always been to create experiences that exceed the expectations of our consumers while delivering upon the needs



Entrance to *Transformers: Battle for the AllSpark* at Universal Studios Beijing

of developers, operators and investors. It really comes back to activating against our Brand Blueprint strategy, which drives us to find new and innovative ways for people to interact with our portfolio brands.

Consumers' tastes and budgets are ever-changing, and it's an exciting challenge to find new ways to create engaging experiences for them while supporting our partners across the business. For example, we have rolled out multiple FECs across the world that require a lower CapEx investment for our licensees, but also are incorporated into high traffic destinations such as shopping malls or other popular "destination" locations in cities or communities. While there has been much written about the general decline of traditional malls, we strongly believe that they will continue to be important destinations for our communities as they evolve from shopping centers to experience centers. We believe that our globally known family of brands is uniquely positioned to be a key driving force to help deliver upon these experiences that today's consumers are looking for.

Additionally, the world changed with COVID-19 where inter-country travel was limited or prohibited. What we observed was that consumers still wanted to have an out-of-home, group experience with friends and family. By providing a variety of "local" experiences, we were able to deliver upon this need and fill a void in the marketplace. Our belief is that experiences that deliver to local audiences — whether it be shows, events, temporary or fixed experiences — will still be in high demand for years to come and help provide significant growth opportunities.

Tell us about Hasbro's portfolio of ready-to-go creative concepts and their benefits.

We made a strategic decision to invest development dollars into creating visual representations of how our brands could be translated from the entertainment and consumer product space into physical attractions and experiences. The key to this was to help partners, developers, operators and investors visualize how these projects could meet their needs.

While this is an ongoing process, I believe that sharing these visions has helped accelerate our business significantly. Working with external design partners to conceptualize thoughts into experiences allows us to continue to innovate in the LBE space and push the boundaries so we can continue to exceed consumer expectations.

What are some key criteria you look for in a potential licensee/partner?

Our team believes that when you surround yourself with good people, good things happen. That is the foundation of our approach, especially given that these are long-term relationships. Most experiences within the LBE space will be around 10, 20 or 30 years. You need to make sure that you can always work and communicate with the partner.

Starting with shared corporate values and ideals, we also want to ensure that the partner has a shared vision for what we are

trying to accomplish. That critical, shared vision and objective will guide all decisions. We also look for operational experience. There is flexibility, however — otherwise there would never be any innovation within the space. So, we make sure that there is a history of success and quality and then augment with internal and consultant expertise.

What makes Hasbro brands stand out in a competitive market?

Location-Based Experiences are a key growth category for us globally and with our family-friendly, globally relevant brands like Transformers, My Little Pony, Monopoly and NERF, we're uniquely positioned for expansion. There is truly "something for everyone" within our deep portfolio of over 1,500 brands. For example, if a partner stated that they are looking to create a family experience that is meant to have cross-generational appeal, we would start with several of our game brands, such as Monopoly. This was our approach with Gamepath, who created the Monopoly Lifesized Experience in London.

Our brands also have longevity and timelessness that can anchor long-term partnerships. Most of the brands in our portfolio, like Transformers, NERF, My Little Pony, Monopoly, Dungeons & Dragons, Peppa Pig and others, have been a part of people's lives for decades, and have continued to evolve to grow in popularity over the years. When you apply that to an LBE experience, you have much more assurance that the brand is still going to be relevant and drive attendance well past any single moment in time. This heritage of our brands also means we can speak to a broad, cross-generational audience.

How does your team stay on top of brand performance in different markets and work with licensees to make the best selections for a project?

The starting point for our team is always about creating a great experience, first and foremost. If you do not have a great experience that exceeds consumers' expectations you will fail — plain and simple — regardless of the popularity of a brand. It comes back to understanding your consumer and their expectations. Hasbro's world-class consumer insights and research team empowers us to understand who our consumer is today and to look ahead as well. This is coupled with the great work that our Global and Local brand teams do every day around the world to ensure that our brands remain relevant, topical and performing at the highest possible levels.

Flexibility, knowledge and sensitivity are key to making a great experience — along with understanding goals, objectives and demographics. However, I would also push all of us to expand our concept of what demographics mean to include cultural awareness and relevancy. Sometimes, as brand owners, we may be rigid in our views of how our brands manifest themselves in the real world — without taking into account local heritage or other cultural norms. So, while we always need to account for age and gender, it is also critically important to know the local



Zombie City in the Compete Zone, a part of NERF Action Xperience

consumer so that the needs of the experience and the brands can be tailored to that audience.

The true win takes place as you create the true emotional bond and connection between your consumer and the brand. The brand then transitions from being just another brand to a way that the consumer identifies and represents themselves. They become a frequent visitor and ardent promoter of the experience, helping to ensure not only the current success of the experience, but the long-term viability of the project.

You've stated that keeping the experiences fresh and relevant is important. How does your team continue to work with licensees/partners after opening to reach this goal?

Keeping it "fresh" requires several things of our team and our licensees. First, we need to make sure that the facility looks as clean and new as it did on the day it opened. This requires a strong quality assurance program where both parties can document what the experience looked like on day one, so there is always reference material. If the facility is not kept at a high-quality level, consumers will recognize this and choose not to revisit in the future.

Second, it requires parties to map out — and plan for — a reinvestment strategy and to have the discussion at an early stage of the process.

Third, staying "fresh" also means staying on top of trends within the industry. It doesn't mean needing to strip out the entire facility but could be simply things such as providing those social media moments for consumers or larger capital investments, such as new attractions or experiences. Either way, there needs to be research, discussion and a plan for how this will all be implemented.

Tell us about Hasbro's LBE team.

We are built around several internal teams:

- 1) Business Development & Account Management
- 2) Production, Operations and Project Management
- 3) Design and Development
- 4) Marketing

We are also supported by our external consultants, partners at outside design firms, and a bevy of others. Our team has evolved over the past eight years as the business has expanded. Each team member brings a depth of cross-functional experience to the group.

The strength of our team has allowed us to focus on being true collaborators — not just licensors — experienced partners who understand the business needs and challenges with a shared long-term view. We work closely with our partners to ensure that they are successful, and it's the experience of our team that makes that possible.

How does your team navigate trade shows such as IAAPA and Licensing Expo to find new collaborations?

IAAPA and Licensing Expo are great forums to showcase our brands and vision, and our presence at these trade shows has led

to meaningful and productive conversations with a whole host of potential partners. Before the pandemic, we had a showcase at IAAPA Expo in 2019 where we presented Hasbro, our portfolio of brands, and our vision for the LBE space. We saw this as a great way to help educate the marketplace about who we are as an organization, how we believe we could make a positive impact on this industry, and where we believe the industry was going. This, coupled with Hasbro's presence at the Licensing Expo, helps solidify and confirm Hasbro's commitment to the LBE space.

Hasbro will be at Licensing Expo 2022, Booth #A159. More information: www.hasbro.com, tel. (818) 478-4324 •••



David Edmonds is a Creative Director and Entertainment Designer from Orlando, Florida. He is a passionate believer in themed entertainment — what it means, how important it is, and how it connects with guests. David has worked on numerous attractions and experiences around the world and loves to share a designer's perspective on the industry through writing and speaking for industry groups.

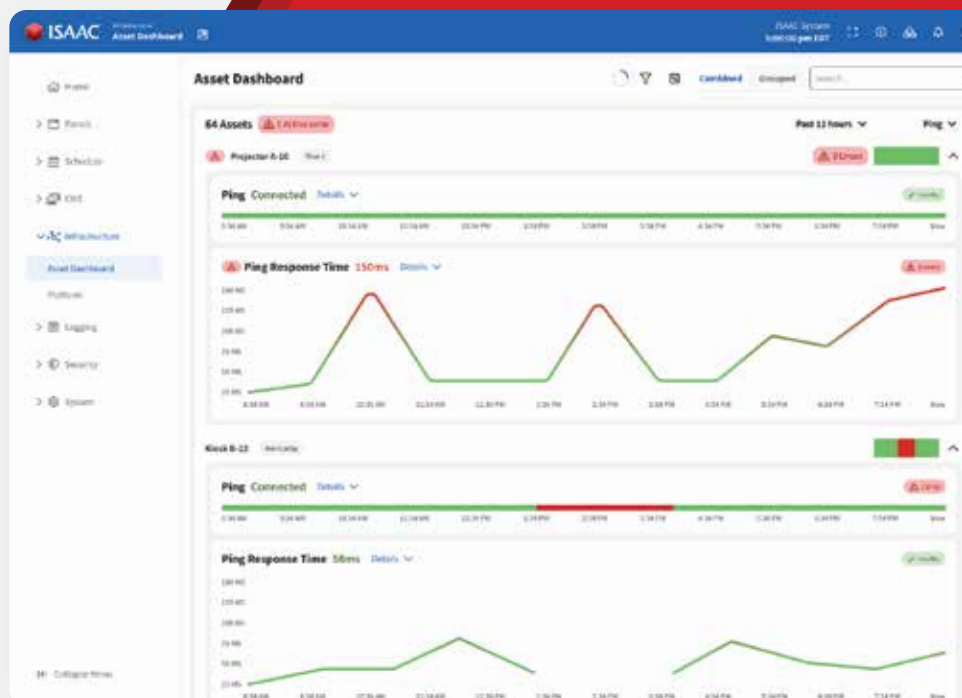


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Barbara Bouza leads Imagineering into new frontiers

Introducing Walt Disney Imagineering President Barbara Bouza

by Joe Kleiman

Barbara Bouza joined Walt Disney Imagineering in June 2020 as President, Business Operations Design and Delivery, rising in March 2021 to work alongside Bob Weis as Imagineering's co-President. In fall 2019, when she had her first conversation with Weis, she could have no idea that these major shifts would take place in the middle of a pandemic. She was all the more impressed by the versatility and capability of Disney and Imagineering given these unprecedented challenges.

"We were all working remotely," she says. "Only our Hong Kong and Shanghai parks had just reopened. I was already impressed with Imagineering because of what I had seen them accomplish before I joined the company. The scale of Disney allows it to reimagine, pivot, challenge dogma and embrace new ideas. Imagineers always talk about taking anything that's impossible and making it possible. I really had the opportunity to see that firsthand during the pandemic."

When Bouza officially became sole President of Walt Disney Imagineering on November 30, 2021, she became the first woman and person of color to hold that position in the division's almost 70-year history. As she transitions into her new job, Weis moves into his: Global Imagineering Ambassador, a position originated by his mentor, the late Marty Sklar.

Finding a niche

Bouza and Weis are both architecture program graduates of the Cal Poly Pomona College of Environmental Design. Weis graduated five years before Bouza. She naturally gravitated toward the field, taking her first architecture class in high school. "I've always loved the idea of creating these physical environments for people," she says.

As a professional, Bouza has held positions at some of the top architecture firms, including Morphosis, RBB and Gensler, where she worked for nearly two decades. "Gensler is where I was before I joined Disney," she says, "and where, working with a couple of the partners, we established their health and wellness practice. I saw an opportunity there where we could leverage our expertise in other fields — whether in hospitality, retail, education, sports and even workplace design — to really bring a different perspective to the world of healthcare."

Under Bouza's leadership at Gensler, the narrative for health and welfare architecture shifted from a purely clinical approach to a more welcoming one centered around the concept of guest experience. During this period,



Barbara Bouza at Avengers Campus, Disney California Adventure
All images courtesy Walt Disney Imagineering.

Bouza co-facilitated a study exploring whether holistic design strategies could improve health and healing. Among its findings, the study concluded that by providing connections to nature, intuitive navigation, and spaces that support activity and engagement, creating an emotional connection, and allowing for personal reflection, an individual's wellbeing can be greatly improved.

Bouza finds that the concept of wellness design is an ideal fit within Disney. "At Disney and Imagineering, it's about experience design — the guest experience and the consumer experience. Wellness design is about physical sustainability and the responsibilities associated with it, but it's also about mental health and mental wellbeing, which has really been challenged over these last couple of years during the pandemic."

Wellness in the parks and the workplace

When Disney first reached out to Bouza in 2019, it came with a surprise. "The first person I spoke to said, 'We're really intrigued with your background around wellbeing.' That wasn't what you'd typically expect. That's something I highly value, and I was pleased that Disney recognized the importance of wellbeing design. With Imagineering creating different types of experiences, one thing I'm really excited about is where we're looking now at experiences that are inclusive for families with a variety of needs."



Bouza with Imagineering Executive Producer and Executive Creative Director Ann Morrow Johnson on a site visit to *Star Wars: Galactic Starcruiser*.



A team of Imagineers at the Avengers Campus, Disney California Adventure



Bouza tours *Remy's Ratatouille Adventure* at the expanded France pavilion, EPCOT.

Within the parks, explained Bouza, Imagineers are exploring ways to allow guests to decompress or experience a less stimulating environment, while maintaining Disney quality and storytelling in the space. The mental wellbeing initiatives stretch beyond the parks to include the Imagineers themselves, many of whom worked remotely from home while also educating their children at home throughout 2020. “An area that I want to focus on is how we can support each other better,” Bouza says of her Imagineering colleagues. “We’re in this for the long haul, and we’re creating this environment where wellbeing and health are at the center of everything everybody does.”

When Bouza joined Imagineering in June 2020, the company’s parks in California, Florida, France and Japan remained closed. Imagineering found opportunities in this unique situation to explore new processes and ways of improving the guest experience. At Disneyland Resort in Anaheim, which remained closed for more than a year, Imagineers performed high fidelity scans of the parks, creating digital files that can be used in a number of ways. According to Bouza, these digital files allow the Imagineers to model potential changes and digitally design with precision, as well as test ways to improve the flow of guests through the park. With the scans in hand, this work can be continued without having to shut down attractions for physical analysis or interrupting the guest experience. Disney can also conceive and create new ways for guests to experience the parks and their features more accurately, be it Main Street’s ambiance or the attractions themselves, from their own homes.

New types of experiences

“I grew up enjoying Disney,” says Bouza. “I had positive experiences around it. Then, with my family, I have two daughters who have also been growing up with all things Disney. They get a real kick out of me working for Disney. They

often say, ‘I can’t believe you’re watching so many Marvel movies or *Star Wars* or all these Disney features!’ They’ve seen a new side to me. I’m really interested and engaged in these franchises, but of course the Imagineers know every story and every character detail. I’m now being exposed to a much broader idea around Disney than I’d had before, and I really love it.”

Throughout 2022, new attractions and lands will be introduced at Disney parks worldwide. One of the first to come online will be *Star Wars: Galactic Starcruiser*, a vacation experience at the Walt Disney World Resort in Orlando, Florida. [See our article in this issue, p. 44]

With this project, Imagineering is pairing the concept of interactive storytelling with the latest technology. “We’re looking at all these ideas around what we call connected experiences,” says Bouza. “We believe in this idea, where we’re taking the shared experience where you’re physically together, but it’s powered from a digital standpoint. I don’t want to give away too many of the goodies on the *Star Wars: Galactic Starcruiser*, but one of the things that appealed to me about joining Imagineering was this idea about technology, around the idea of looking at characters in innovative ways, through robotics and other layers. These are layers where we

can engage with a guest in new ways. It's a very smart approach, but also very different than what we've done before."

As with a cruise ship or a resort hotel, both of which are fields in which Disney is an industry leader, the *Star Wars: Galactic Starcruiser* experience will vary depending on the age and interests of each participant, as Bouza elaborated, saying, "You can be like me — I may just want to sit and relax — or you could be like my kids, completely immersed in the *Star Wars* story. And how we interact with a young child may be different than with an adult. I think you're going to see many more projects based on how we create these stories that are uniquely Disney, where the guest is drawn to be part of that full experience — everything down to the food, the rooms, the entertainment and the relationship with the characters and with the stories. That's something that's getting us all very, very excited."

The piano and The Beatles

Recently, a new(ish) hobby has gotten Bouza excited at home. As a child, she took piano lessons but didn't get far. Bouza recalls the instructor telling her mother that she was "wasting her money."

Not too long ago, Bouza's husband, fellow architect Manuel Bouza, bought her a piano and encouraged her to seek out lessons, pointing out that she often spoke about those lessons she

ignored as a child. Bouza told her new instructor to start from the very beginning, as if she had never taken any lessons.

"Right now," says Bouza, "I'm in the middle of watching 'The Beatles: Get Back' documentary on Disney+. You know, when you think of how young they were, when they first got together and then how prolific they were as musicians, it's pretty inspiring. There's a scene where Paul McCartney's talking about how songs are composed and he's talking about the piano and the composer and I'm totally into that. I found a piano music book that somebody gave me a couple of years ago with Beatles music, which used to be too hard for me, but now I just sit down at the piano and I can play it."

As Bouza looks to past experiences for inspiration, so will Bob Weis, who will be taking an intensive look through the Imagineering archives, especially the files of Marty Sklar. "I like this concept of marrying what we do with really understanding the rich legacy of Imagineering," she says. "I think Bob and I are going to be able to complement each other. I'm very focused on how we're starting to look at the future, but also, how do we leverage our history?"

During their first meeting in 2019, Weis discussed the large number of projects on Imagineering's plate and the need for mat-building, a form of grid-based modular design and construction for buildings. He also emphasized the importance



Barbara Bouza (center) at Walt Disney World's EPCOT, currently undergoing a multi-year transformation.

of Imagineering embracing a very different kind of future, one that looked at solutions from a diverse range of perspectives. He told Bouza, “We need to understand what’s going on outside of our castle walls.”

A new HQ

Part of the future is a move, along with most of the Disney Parks, Experiences and Products segment, to new headquarters in Florida — in Lake Nona, part of the Orlando metro area. The relocation applies lessons learned at Disney from the unexpected challenges brought on by the pandemic and the resulting changes in workflow and project development. “These past couple of years have been tough for all of us and in pretty unimaginable ways, both personally and professionally,” says Bouza. “Change can be hard to grasp and understand, but we also need to stretch beyond our comfort zone. I think we’ve all learned that this past year.”

Bouza likes to quote a saying from Walt Disney, one that she keeps on her wall: “We keep moving forward, opening new doors and doing new things because we’re curious, and curiosity keeps leading down new paths. We’re always exploring and experimenting.”

“While relocating a large creative, highly specialized organization like Imagineering to Lake Nona is a challenge,” she says, “it is an unprecedented opportunity that will open new doors and create a global platform. We are focusing on innovation through collaboration.”

Diversity and outreach

Bouza’s chosen profession, architecture, is a multi-disciplinary collaborative effort. “You can never do anything individually,” she says. “Even though, sometimes, that’s the reputation of architects.” One of the reasons Bouza chose Cal Poly Pomona for her academic studies was its cross-disciplinary approach to education. Disney’s Imagineers employ a similar approach, with architecture being one of the many disciplines. At Imagineering, Bouza points out that the multi-disciplinary factor extends beyond the division as the Imagineers have access to the full breadth of The Walt Disney Company — from ESPN and ABC producers to animators and film directors.

With multi-disciplinary teams comes the opportunity for diversity, something that Bouza has embraced through her community



Bouza and her piano

outreach, be it through Girls, Inc., a mentorship program, or Architecture for Communities Los Angeles (ACLA), which she played an instrumental role in developing during her tenure as LA chapter President of the American Institute of Architects (AIA). ACLA teaches students that they have an opportunity to impact the environment of their community.

Another project that Bouza is involved in is Imagine LA, a nonprofit focused on ending the cycle

of poverty and homelessness. “At times, it can get distressing because you kind of wonder, are we making a difference,” she shares. “We focus specifically on families because that is a demographic around homelessness that I don’t think a lot of people see, but it does exist. And our program focuses on peer-to-peer mentorship. So, anyone in one of these families who is over the age of five has a mentor.”

As a woman of color, Bouza has also embraced her status as a role model, but tempers it with the understanding that all diverse voices should be heard. Once she became a practicing architect, Bouza realized there weren’t many who looked like her in the field. She computed that just 550 African American women are licensed architects in the US, roughly 0.4% of the entire field.

“To me,” Bouza elaborates, “it’s important where I represent a specific demographic, but I really represent everybody. I’m not only targeting people who look like me, but I do recognize that that’s important. There’s such a vibrant culture here at Imagineering and it’s important for us to continue to foster and grow that.” She continued by acknowledging that she may have come to Imagineering with a very different perspective than others, but she will never lose sight of the importance of the organization’s rich legacy, and opportunities that lie ahead. •••

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The academic ecosystem

A guide to Orlando's themed entertainment academic programs

interviews by Judith Rubin

Colleges and universities now recognize “themed experience” as an academic field, and today some 20+ institutions are listed on the website of the Themed Experience and Attractions Academic Society (TEAAS, teaacademicsociety.org), benefiting students and the industry with tailor-made programs that produce highly trained and educated candidates. As an international hub of the industry, it is fitting that Orlando has its own vibrant and diverse cluster, a unique themed entertainment education ecosystem with options to study themed experience design and production, project management, and hospitality management at both undergraduate and graduate levels.

One of the pioneers of this realm is Peter Weishar of the University of Central Florida. For this roundtable, Professor Weishar brought together colleagues from several Orlando-area institutions to share details of their programs. “We are all passionate about the industry and training the next generation of themed experience designers and managers to benefit its future,” says Weishar. “We collaborate with one another, from guest speaking in each other’s classes to sharing books and curriculum concepts. We come together annually at the Themed Experience and Attractions Academic Symposium, held the last day of the Orlando IAAPA Expo.”

On the undergraduate side, the Ringling College of Art and Design offers an Entertainment Design degree and the University of Central Florida (UCF) Rosen College of Hospitality Management offers a Theme Park and Attraction Management degree track or certificate. For graduate degrees, UCF offers a Master of Science (M.S.) in



Students learn onsite at Ringling College.

Themed Experience as well as a Master of Fine Arts (MFA) track in Themed Experience. The University of Florida (UF) has an M.S. in Architectural Studies with a concentration in Themed Environments Integration in their CityLab-Orlando. UCF Rosen College also has an M.S. in Hospitality & Tourism Management.

In addition to Professor Weishar, we heard from Jamie DeRuyter (Ringling College), Dr. Ady Milman and Dr. Carissa Baker (UCF Rosen College), and Steven Grant and Stephen Bender (UF).

Tell us about your background and credentials.



Jamie DeRuyter: My background is in animation and visual effects. When I got the chance to intern at a small media company in Orlando working on theme park attractions, my mind was blown. Pixar and the movie industry was my original goal, but this industry really captured my attention and imagination. I am a faculty member in several disciplines at Ringling College.

Ady Milman: My background includes teaching, research and publications in the fields of theme park and attraction management, marketing, strategic management, and hospitality and tourism. I have been affiliated with several international universities and developed the Theme Park and Attraction Management curriculum at UCF. I was a Disney Sabbatic Professor and a two-time winner of the Fulbright Scholar Award in addition to other awards. I am a Professor in the Tourism, Events & Attractions Department.





Carissa Baker: My experience includes operations roles at Disney and Universal in California and Florida in addition to design consulting. I have taught in China and been a

visiting scholar at Breda University of Applied Sciences in the Netherlands. My interdisciplinary scholarship is focused on various aspects of themed entertainment but especially narrative. I love teaching and research but also connecting with the industry; I am involved with IAAPA, Slice Creative Network, the Themed Entertainment Association, and the TEAAS. I am an Assistant Professor of Theme Park and Attraction Management.

Peter Weishar: I worked as a game designer and digital artist before entering academia. I started my academic career in the NYU Interactive Telecommunications graduate program. From there, I went on to Dean of Film, Digital Media and Performing Arts at SCAD, where I started the Themed Entertainment Design graduate program. About four years ago, Dean Jeffrey Moore recruited me to start the Themed Experience Graduate programs at UCF — I jumped at the chance and am now Director of Themed Experience at UCF.



Steven Grant: I have been a registered architect for 40 years, practicing in Chicago and New York before moving to Los Angeles in 1991 to be an Architect and Design Manager at Walt Disney Imagineering, where I spent 28 years

design managing theme park projects at Disneyland and Walt Disney World, before retiring in 2019 to be the founding program director of the TEI program at UF's CityLab in Orlando.

Stephen Bender: I am an architect and educator. I am the Director of CityLab-Orlando. The future of our profession relies on us redrawing boundaries, sharing territory, extending invitations, and welcoming new people. Based on this, I lead development of the MSAS Concentration in Themed Environments Integration (TEI) at the University of Florida's CityLab-Orlando.



Please share some basics of your program.

DeRuyter (RCAD): A few years ago, Ringling College offered a BFA in Entertainment Design with an emphasis in Themed Environments. We're wrapping up our third year in the program and are so excited to have our first senior class this fall.

Milman & Baker (UCF Rosen): The Theme Park and Attraction Management track of the Bachelor of Science in Hospitality Management began in 2001. It is a management-focused degree that gives students a background in core topics, including guest experience, employee engagement, product development, risk management and operations. Our program is a traditional 120-credit bachelor's degree where students take general education requirements, hospitality core courses, electives from several areas and theme park track classes. We also offer a 15-credit certificate in Theme Park and Attraction Management for students in non-Hospitality Management UCF degrees.

Weishar (UCF): We have two graduate programs. The Themed Experience MFA Track in Theatre is a six-semester, 61-credit degree program. It includes a thesis and extensive opportunities for internships. The M.S. in Themed Experience is a standalone degree program that is only 33 credits. The M.S. can be completed in four semesters of mostly night classes. Both programs focus on design and production. The students graduate with a portfolio of creative work. Many of our graduates have aspirations of becoming Creative Directors for themed entertainment companies.

Grant (UF): The Themed Environments Integration (TEI) program includes two paths of study: the Graduate Certificate (21 credit hours) and the M.S. in Architectural Studies Concentration in Themed Environments Integration (36 credit hours). The Graduate Certificate is intended for individuals not wanting to undertake a master's degree but want the basic education to expand existing credentials (set designers, architects and engineers, for example) or to advance in the industry. The M.S. is a research degree and requires the production of a Thesis or Master Research Project. The TEI program is within the College of Architecture but includes multiple disciplines.

Bender (UF): My collaboration with industry professionals and UF peers resulted in an outline curriculum, approved by the graduate school and further developed by Steven Grant. I currently teach the research component of the curriculum. Students begin this program challenged to collaborate and create new knowledge together. We learn by engaging novel problems of practice and life through serious methodical and theoretical reflection. This culminates in a Thesis or Master Research Project.

What are the advantages of being located in Central Florida?

DeRuyter: I have been able to maintain a professional practice in the industry while teaching full time. This has been a tremendous opportunity to keep the college and our students connected to the epicenter of the entertainment design world. We've taken lots of fun field trips, visited many studios, attended great TEA events, IAAPA, the parks, Kennedy Space Center — on and on. This really is the place to be if you want to get started in the industry!

Milman & Baker: Central Florida is a living lab for the themed entertainment industry, and our students benefit from the local theme parks and attractions to complete their required internships and gain experience. Rosen College is only minutes away from



Bender and Grant with students during the TEAAS session at IAAPA.

Universal Orlando Resort, SeaWorld Orlando, Walt Disney World, the IAAPA World Headquarters, the annual IAAPA Expo at the Orange County Convention Center, and many other popular local attractions. The theme park and attraction track is also supported by an active Advisory Board that helps to guide curriculum, classroom engagement, and provide employment opportunities to our students.

Weishar: There are hundreds of opportunities for creative internships and full-time work in the field while students are attending school. We are also able to hire amazing adjunct instructors, leaders in the field based in Orlando. Of course, Orlando offers the opportunity for students to see and engage with world-class themed experiences as well. Frankly, this is the best place in the world to study what we do.

Grant & Bender: Access to the companies and their staff that design, develop and manage themed environments around the world. This access has provided the TEI students with internships, jobs, knowledge and guidance.

What kind of applicants do you seek for your program?

DeRuyter: We place heavy emphasis on the portfolio, particularly the type of work. We want to see that the student is already thinking of experiences. There needs to be a good fit with the student's interests and the curriculum. Most of our majors at Ringling College help students develop skills that are applicable to this industry, so we like to see them practicing the skills they love.

Milman & Baker: Students in our program should have leadership potential, strong oral and written communication skills, an interest in the industry, enjoy working with people, and go beyond to the "spirit of hospitality," or a drive to serve and assist our guests. Rosen College's core values are Professionalism, Leadership, and Service. The most successful students are engaged in course content but also immerse in the industry through work experience, student organizations like the Future Theme Park Leaders Association (FTPLA), industry networking events, and educational visits to attractions.

Weishar: Our programs at UCF are looking for applicants with the talent and ability to design and produce themed experiences. We weigh the portfolio rather heavily in the application. We have a core of visual arts-based studio classes, but also require writing, engineering and hospitality management.

Grant & Bender: We look for a diversity of interests and studies. If, for example, we had a choice between a student with an Interior Design degree with a theater minor versus one that does not, we would choose the applicant with the theater minor. That is just an example. You do not have to study theater — but do not stay within a silo in college. Expand into art, philosophy, literature, etc.

Where do you see your graduates being placed in the industry?

DeRuyter: With a focus on the built environment, we hope to see our grads taking on scenic design roles, props, model making, sets and lighting. As a four-year BFA, they will also come loaded with art history, liberal arts, and possibly minors in areas such as business, sculpture, visual development and graphic design. This broad foundation helps set them up for success.

Milman & Baker: Our program is well established, so we have alumni who work in various capacities throughout the world ranging from global companies with local ties (e.g., Universal and Disney) to out-of-state locations in organizations like Herschend Family Entertainment, Six Flags Entertainment Corporation and Palace Entertainment. Students have diverse careers in operations management, executive management, marketing, consulting, research and creative experiential design jobs.

Weishar: We have seen an impressive rebound in the themed entertainment industry and increased demand for our graduates. Since our students are working on the creative side, many are working on future projects, but some are painting scenery, making props, and working on current installations. With Walt Disney Imagineering moving to Lake Nona, there will be an even greater demand for creative talent in the next few years and we are expanding our programs to accommodate that need.

Grant & Bender: The intent of the program is to provide a broad overview of the themed environments industry. Our objective is not to teach a mechanical engineer to be an art director but to make that engineer a more knowledgeable collaborative team member. The TEI student body

is made up of students with undergraduate degrees across many different disciplines. The diversity of knowledge and perspectives they bring to the program supports engaging conversations and sharing of knowledge, resulting in interdisciplinary collaboration and problem solving. Our graduates fit into any environment where collaborative design and program solving are needed.

Tell us about your collaboration with the themed entertainment industry in Central Florida.

DeRuyter: To help develop our program, we've been so fortunate to be able to work with incredible artists and designers from great places like Bungalow Scenic Studios, ITEC, Feld Entertainment, Falcon's Creative Group, Nassal, Hotopp Creative Studio, Creative Arts, Wacky World, Universal Creative, Disney and more.

Milman & Baker: Our Advisory Board is continually collaborating with industry leaders who make suggestions for the educational program's development and improvement. Dozens of professionals speak every year in our classes, internship preparation courses, professional portfolio workshops, leadership seminars, and student organizations. We also engage in organization-specific recruitment days (e.g., Disney Day, Universal Day, Busch Gardens Williamsburg on-site interview day) as well as a Career Fair every semester. Industry professionals teach in our program on a part-time basis, and some of our full-time faculty conduct research with and for the industry on a range of current issues. Organizations including the IAAPA Foundation and the Florida Attractions Association have been generous with student scholarships. Operators have likewise been kind to our FTPLA student organization, with a highlight being an annual trip to California for management shadowing at the Southern California theme parks.

Weishar: We are only three years old, but we have already held collaborative classes with Falcon's Beyond and Christie, and look forward to an ongoing relationship with both. UCF Themed Experience has an active Advisory Council with leading executives from Walt Disney Imagineering, Universal Creative, Birket Engineering, Feld Entertainment, Herschend Family Entertainment, AOA, Falcon's Creative Group, and the Orlando Magic.



Peter Weishar speaks during a collaborative class with UCF and Christie.

Grant & Bender: The focus and content of the TEI program curriculum was determined by UF in collaboration with leading individuals in the Orlando themed environments industry, which has supported the program by providing guest speakers and student advisers. Since the first cohort began in fall 2019, the program has hosted 98 guest speakers and advisers representing 40 different companies. The industry also identified themed environment research as a need. Stephen Bender and Frank Bosworth, Ph.D., lead the development of the student thesis. In their first semester, students are taught research methods and immediately begin self-directed research pursuits, culminating in a thesis that contributes valuable new knowledge to the industry. This focus on research is part of what makes this master's degree unique. • • •

Contacts

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UCF Rosen College of Hospitality Management

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UCF Themed Experience

Website (MFA): <https://www.ucf.edu/degree/theatre-mfa/themed-experience/>
Website (MS): <https://www.ucf.edu/degree/themed-experience-ms/>
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UF Themed Environments Integration

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The Pakistan pavilion at Expo 2020 Dubai featured a colorful exterior and an engaging visitor experience inside.

Voices of Expo 2020 Dubai

Learning about the importance of Expo through the people who work there

by Martin Palicki; photos by Paul Williams; interviews by Tina Kreitlow

Expo 2020 Dubai boasts 192 participating countries, each with their own pavilion. Over half of the pavilions are housed in small, boxy buildings in the central portion of Expo's three themed areas: sustainability, mobility and opportunity. Even though these countries have smaller spaces to work with many have fascinating exhibits. The Syria Pavilion, for example, introduces visitors to the world's first alphabet and the first known written song, while featuring Syrian art that touches on some of the country's challenges.

Roughly 70 country pavilions are housed in custom-designed, architecturally unique buildings. These are the pavilions many expo visitors talk about and seek out. For more on the Expo experience and some pavilion highlights, be sure to read Carissa Baker's piece "A coalescence of great design minds: Expo 2020 Dubai" at inparkmagazine.com. During InPark's visit to Expo 2020 we also wanted to get the perspective of people who work in the pavilions, find out what Expo means to them, and perhaps even learn why having an Expo is important.

Iraq

The Iraq Pavilion is conceptually simple yet effective. A wave-like canopy is perched above a series of LED walls of differing widths and heights connected together to create a sort of crooked hallway. The LED walls represent the paths of the Tigris and Euphrates rivers, and the height of each screen represents the water level at that point of the river. Around the pavilion a



Tina Kreitlow and Martin Palicki interview Sarah Al-Qaisi at the Iraq Pavilion.

series of markers in the ground demarcate the borders of Iraq, giving visitors an immediate sense of the importance of the two rivers to the country. Guides take guests on a short tour between the two rivers, pointing out landmarks and highlights that appear on the LED walls. At the end of the tour visitors can explore pieces from Iraqi artists.

Sarah Al-Qaisi is one of the Iraq Pavilion's tour guides and has been working at Expo since mid-October. Like many others, Al-Qaisi is excited to share information about her country with visitors. Many people, particularly those from Western countries, have notions that are based on a narrative that other countries have crafted for Iraq. Expo provides a space for countries — and people — to share their own stories.

"I want them to change the image that they have about our country," says Al-Qaisi. "We have a very rich culture and great art. People need to see it and they need to understand it's not the same as it's being portrayed sometimes in the media."

As an architect, Al-Qaisi has enjoyed touring many pavilions at Expo and she understands the importance of challenging those preconceived notions not only through exhibits but through a building's design itself.

"It's amazing. I go and I see each and every pavilion is different than the rest. Each building incorporates their culture and their country in a very modern way," says Al-Qaisi. "Then I can go inside and get to know about a culture and get an idea about each country."

The Netherlands

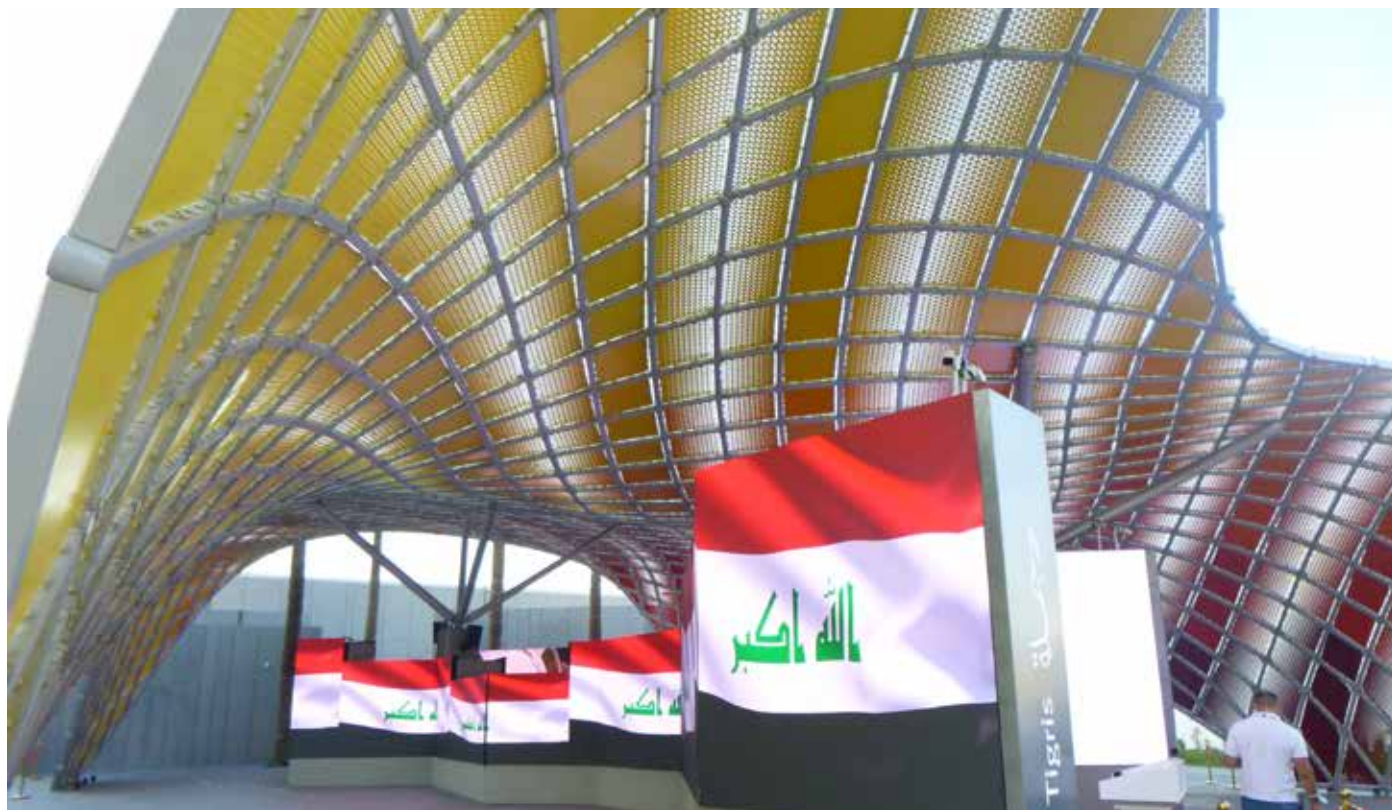
Intriguing architecture can be found across the Expo site, including at the Netherlands Pavilion. Industrial and imposing, the building is constructed of giant metal sheets, like what is used to build a marina or a breakwater.

According to Magnus van Haaren, ambassador for the Netherlands Pavilion at Expo, a Dutch company builds the metal supports, which have also been used in creating The Palm Dubai as well as many other sea barriers around the world.

Unlike Iraq, which is telling a story mostly about their country, the Netherlands Pavilion is focused on Expo's core theme of sustainability, while still promoting Dutch companies and ingenuity.

Once inside the pavilion visitors see a preshow depicting how water, energy and life are all interconnected. Visitors are handed white umbrellas and enter into the heart of the pavilion, the inside of a giant cone-shaped structure. As the main show starts, guests open their umbrellas and see a video projected directly onto their own private umbrella-turned-screen. They learn that the entire pavilion is designed as a way to capture solar energy, extract water and use both to grow food.

"What we present is a major innovation for Expo and for the world to showcase our knowledge of sustainability," says van Haaren. "We present a solution for how you can generate water in the desert."



The Iraq Pavilion at Expo 2020 Dubai used giant LED screens of varying heights to show the routes of the Tigris and Euphrates rivers through the country.



The Netherlands Pavilion at Expo 2020 Dubai used industrial supplies to build a system capable of capturing humidity in the air and using it to grow plants and vegetables.

The pavilion features a patented machine that uses solar energy to extract humidity from the air and, through condensation, generates a robust water supply.

“Around 800,000 liters of water are generated every single day, and we use that water to give life to a vertical farm, which is symbolic of Dutch knowledge about sustainability and vertical farming,” says van Haaren. “Here you can find basil, mint, asparagus and tomatoes. And everything is edible.”

The Netherlands Pavilion is one of many conceptual pavilions at Expo, but it is one of the best examples of combining entertainment and information into a solutions-focused format, creating a blueprint for how to live sustainably in challenging environments.

Pakistan

While the Netherlands Pavilion is metallic and angular, the Pakistan Pavilion is bright and colorful. Its curved walls lean in to create a courtyard and path towards the entrance. Once inside, guests explore the sights, sounds and smells of Pakistan.

Visitors see cultural artifacts and images of Pakistan’s topography while learning about the history of the country. After crossing a bridge over the pavilion’s entrance courtyard, the narrative shifts to Pakistan’s current technology capabilities and plans for the future, including ideas for how to combat global warming.

Like many other pavilions, Pakistan uses Expo as an educational opportunity to help people better understand the country and all it has to offer. Amna, a Pakistani worker who preferred to use only her first name, says people were often surprised by the pavilion.

“The one thing we get a lot of feedback on is that people didn’t know Pakistan had such diversity, in terms of the landscapes, in terms of the religions and the culture. It is so deep and so rich in

history that people didn’t know about,” explains Amna. “People are very surprised to see this face of Pakistan.”

Amna is also proud of everything Pakistan has accomplished. Expo provides an opportunity to share that with the world.

“Looking back 20 years and then looking at the current situation, there’s so much more empowerment of women now, and so much more development in the field of education,” she says. “It’s amazing.”

It is amazing. And it is precisely that sense of pride that pavilion staff have for their homelands that makes Expo really special. Yes, Expo is a showcase for technology, art and architecture. Yes, the experiences, entertainment and food are a major part of Expo. But the best part of being at Expo is having the opportunity to meet and interact with people from all around the world. The types of interactions we had with Sarah, Magnus and Amna were replicated time and time again across Expo.

There simply is no other place where one can connect with so many different people and cultures in a single day. Particularly as we become more accustomed to virtual interactions with one another, we cannot underestimate how important it is to meet someone new face-to-face (mask-to-mask) to share our experiences, our knowledge and our passions. This is the heart of Expo and a core value it brings to the world. • • •



The Pakistan Pavilion used lighting and special effects to prompt visitors to consider the future and conservation.



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The United States of America Pavilion at Dubai Expo 2020, seen at night.
All photos of the USA Pavilion are courtesy of Karl Yazbeck and Ibrahim Rahma.

Stars and stripes

Thinkwell Group turnkeys a world-class expo pavilion for the United States at Expo 2020 Dubai

interviews by James Ogul

Dubai Expo 2020 is, at this writing, near the end of its six-month run (closing March 31, 2022). Thinkwell Group was turnkey designer and producer for the USA Pavilion, appointed by the U.S. Department of State.

To design, produce and finance a world's fair pavilion is always a complex process with multiple stakeholders, looming deadlines and international logistics. The USA pavilion had its share of unique challenges — and, of course, the pandemic brought additional complications to all. Thinkwell's team was interviewed

by InPark's in-house expo specialist James Ogul, who spent many years with the State Department overseeing the U.S. presence at world expos and has written extensively on the topic.

In this article, we hear from Thinkwell Chief Creative Officer Craig Hanna; Senior Art Director Chuck Roberts; Senior Interior Designer/Lead Show Set Designer Suzanne Wright; Thinkwell EMEA Managing Director Amin Rashmani and Thinkwell Studio Montreal Producer Antoine Roy-Larouche.



Craig Hanna
Chief Creative Officer,
Thinkwell Group



Chuck Roberts
Senior Art Director,
Thinkwell Group



Suzanne Wright
Senior Interior Designer,
Thinkwell Group



Amin Rashmani
Managing Director,
Thinkwell EMEA



Antoine Roy-Larouche
Producer,
Thinkwell Studio Montreal



The USA Pavilion combines projection technology with large set pieces to convey messages. Here, guests see a replica of the Statue of Liberty's torch, a symbol of freedom.

Other key team members for this project were Thinkwell Creative Director Pete Ford; Technical Lead James Duke; and Thinkwell Media VP and Executive Producer Cory Watson.

The U.S. pavilion at a world expo receives a lot of attention and expectations are high. How do you design for those expectations and make sure the bar is high enough?

Craig Hanna: The United States must be represented as a world-class presentation, but this gets carried all the way through the fit and finish, wayfinding, media production quality, and overall aesthetic of the pavilion to deliver on a high quality, entertaining, educational, and (hopefully) emotional experience.

Amin Rashmani: We worked closely with the U.S. Department of State throughout the creative process. It all started with deep dive creative charrettes, engaging not only the State's project team, but also multiple stakeholders from museums, universities and subject matter experts. The concept was also presented at the White House for final sign-off. Throughout design and construction, State was fully engaged, informed and supportive, and the transition between the two administrations was also seamless. It was a truly collaborative effort.

Tell us about your company's background with world expos and why this was a meaningful project for Thinkwell.

Hanna: The idea that we worked with the State Department to help shape public diplomacy and showcase the innovation and freedoms of the U.S. to the world was a heady, rewarding experience for us. Having done a variety of commissions for prior expos, along with being on the bid team for Expo 2020

Dubai and having developed the Site Interpretive Plan, Entertainment Masterplan, and Metanarrative for the expo, it was great to dig into conceiving, creating and delivering a pavilion.

Chuck Roberts: This was the third time that I have been on a design team for a USA expo pavilion, and each time it gets better. We had the unusual opportunity to design the guest's journey from beginning to end. You can really feel this unified sense of focus as you move through the pavilion.

Tell us about the guest experience, including the VIP area. How did you balance the needs of stakeholders and make sure the vision was fulfilled?

Hanna: It was a challenge to not only develop a pavilion that achieves living up to the lofty theme of "Connecting Minds, Creating the Future" for the Expo, but to also ensure we delivered on the sub themes of "Opportunity," "Mobility" and "Sustainability." We worked with the State Department to ensure that the theme and subthemes were represented in the overall guest experience in the pavilion.

Rashmani: The experience is a linear, purposely paced journey exploring the United States as the leader in individual liberty and innovation and celebrating the American entrepreneurial spirit that has influenced the world. Thematically, we wanted to reflect the expo theme and subthemes in the heart of the USA Pavilion by contextualizing the themes into the American vernacular and exploring "what's next" for the USA and the world.

Mobility — never standing still, constantly creating the future — is at the heart of the American experience and of the USA Pavilion.



Exhibit Four at the USA Pavilion features a large overhead show space that includes flying large set pieces in and out of the show space, multiple projection surfaces, and integrated lighting and sound systems.

We explore the future and how that will lead to a seismic shift in the way we all live. We also explore the future of the most exciting of transport systems: space travel. To be mobile is to be dynamic.

Opportunity: America is known as the land of opportunity. It creates opportunity through encouraging entrepreneurial spirit.

Sustainability is explored through the presentation of the cutting-edge technologies and thinking that is taking us to Mars. A sustainable society can and will be possible through the invention of technologies and ideas that can be used here on this planet.

As we dug deeper into the stories, we discovered that the “constant” was the idea of freedom that enables a dynamic society to live, create and prosper — the core principle upon which the United States was formed. This became the inspiration of our theme: Life, Liberty, and the Pursuit of the Future. The narrative starts with the idea of freedom and chronologically highlights American innovation. The narrative drove the spatial planning of the exhibits, and the stories were carefully curated to be told in a 20-25 minute experience.

Suzanne Wright: The dedicated back entrance for VIP visitors includes conference and function areas, along with administrative offices, CG and Deputy CG office, as well as back-of-house support areas. A key driver was to provide a beautiful environment showcasing the best of American owned companies/American made manufacturing through the selected furniture and materials. All finishes were carefully selected to reflect a sophisticated American look: bold lines, a calming

palette accented with rich jewel tones, subtle visual textures, dynamic mood lighting and refined decorative elements.

Roberts: We knew we had a great story to tell. The first exhibit starts small, with the guests surrounding the torch from the Statue of Liberty as we explore the concept of freedom. As we move through the next exhibits, the spaces become larger and by Exhibit Three, which focuses on today’s innovations, the guests are surrounded entirely. In Exhibit Four, which is focused on the



The SpaceX Falcon 9 full-scale replica

future, the ideas are so big we had to move the show overhead! The shows really illustrate how this concept of freedom allowed the USA to contribute so much to the world.

The idea of having a full-scale replica of the SpaceX Falcon 9 was impressive. How did you work out the details of fabrication and transport to Dubai?

Rashmani: We wanted to showcase the SpaceX Falcon 9 rocket in its form as it returned from space. This was purposely done to solidify the intent of the rocket as a sustainable, reusable asset. We used reference imagery and actual photos and fabricated the rocket replica in Dubai. We engaged a structural engineering firm to design the steel structure and foundation accordingly and a scenic fabricator to build the shell. It was designed to be delivered and installed in four cylindrical pieces.

Hanna: We worked directly with SpaceX to make sure the Falcon 9 was as authentic as possible, all the way down to the aging, dirt and soiling.

Roberts: The rocket was quite a challenge. Being a replica, it required a structure of its own and then the cladding would be added on top. But the connection points and hinges for the legs are these amazing and delicate structures. Hiding the actual structure within these connection points was a bit of magic. I am very proud of how well it worked.

A moving walkway carries visitors through one portion of the pavilion. Tell us about this part of the guest experience and what influenced your design choices.



A moving walkway transports guests through the first part of the USA Pavilion.



Technology and history blend together throughout the entire pavilion.

Rashmani: We wanted to purposely curate the guest journey with an uninterrupted flow. The moving walkway, slower than walking speed, was the perfect solution.

Hanna: Many participants don't think about the capacity of the pavilion or the need to move as many people as possible through it. We think about ROI in terms of people who take in the public diplomacy message of the participant's pavilion. Using the moving sidewalk created a "ride system" of sorts to ensure a consistent, high-capacity experience while also creating a distinctive experience feature unseen elsewhere at the Expo.

Roberts: The moving walkway was both practical and fun. The media cycles for each exhibit were timed to the walkway so everyone saw the complete show sequence. Guests really liked the novelty of the walkway. There was also room to step off the path and just watch the procession if you wanted to. And due to COVID, the walkway was very helpful. By holding each group of guests for just a few seconds before they stepped aboard, it could help to maintain safe distancing.

Tell us about some of the challenges faced and how you overcame them to get the job done.

Rashmani: The biggest challenges were predominantly related to logistics, travel restrictions, and delays in construction due to developments with COVID affecting team members, vendors and suppliers. Our mitigation strategy right off the bat involved 1) ensuring that we build additional float in our project schedule, 2) procuring the long-lead items immediately after concept development and in parallel subsequent design stages, and 3) mobilizing the core team members and international collaborators onsite early in the process to reside in Dubai to alleviate concerns around travel restrictions.

Thinkwell's involvement began a year in advance of the initial Expo opening date. It started through advisory services to define the experience, layout and architecture (by Woods Bagot). Following this phase, Expo took over the construction of the



Projections of various American inventions and their development throughout time are seen within the exhibit.

building while Thinkwell was contracted under the U.S. Department of State to further develop and turnkey the exhibit. We worked hand-in-hand with the pavilion General Contractor (Electra) and closely integrated the project schedules and timelines.

COVID added another challenge to the initial timeline. But Thinkwellians and our collaborators across the world have long been accustomed to working while on the road, virtually and across time zones due to the nature of our international presence.

What else would you like to share about this project?

Rashmani: We were involved in the design of the building along with Woods Bagot, who designed the architectural theme and the facade. We are also involved in the operations of the pavilion.

Antoine Roy-Larouche: In addition to media production, Thinkwell's team in Montreal led the development of the projection mapping solutions throughout the pavilion. The 3D projection mapping seen in multiple exhibits relies on Thinkwell's patented autocalibration system. From the projection mapping studies to the integration in show control, Thinkwell's autocalibration system solves for complexities that cannot be done by any other system on the market. The Statue of Liberty's iconic torch had a very complex shape and was easily the most challenging piece to map at the pavilion.

In total, this project involved 26 video projectors, 21 calibration cameras and four media servers. Thinkwell also developed the show control system integration of the calibration system.

Hanna: Thank you to all who were involved in making the USA Pavilion a reality! • • •



Since retiring from the U.S. State Department in 2011 after a 30+ year career in world expos, James Ogul (jogul@comcast.net) has remained on the scene in an advisory and consulting role. He writes regularly for InPark Magazine about world's fairs. See his free online book, Tales From the Expo.

Contractors and suppliers, USA Pavilion at Expo 2020 Dubai

(provided by Thinkwell)

Architectural advisor

Woods Bagot

Fabrication firms

Mint Creative Production
Adirondack Studios

Construction

Electra Exhibitions LLC

Other exhibit and show contributions

CTME
Diligent Robotics
TECS Event Services
SpaceX
Cornell University
Zone Display Case
Maggs Bros. Ltd.
QT Luong
Hugh Fleming
Intellectual Properties Management
San Francisco Museum of Modern Art
Bharathi & Gitanjali & Bharathi Rao
Sharif Hamza
Jordan & Jen Reeves
Dr. Yvonne Cagle
Zipline
Nanoracks

Facility and fit-out

Inoksservis
Tony Gee
Glidepath
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The experience designer's guide to Expo 2020 Dubai

by Martin Palicki

The 200 pavilions at Expo 2020 Dubai present a wide range of experiences. Many are architecturally intriguing. Beyond the architecture, however, what makes for a good pavilion? Some are structured like museums, others like art galleries. A few completely defy categorization. Some of the best pavilions rely on skilled experience designers to help craft an enticing environment that tells a story, engages with guests, and provides helpful information.

Austria

On the low-tech side, the Austria Pavilion is a series of connected cone-shaped buildings, designed in homage to traditional Middle Eastern structures. Inside, small exhibits connect each of the five senses with elements of Austria, including an art installation that converts a guest's heartbeat into a unique piece of art.

Iraq

A small pavilion that's well executed, Iraq provides a short tour through a hallway of LED screens that represent the Tigris and Euphrates rivers. Markers in the ground outline the shape of the country while a tour guide points out the different highlights of Iraq. It's simple, uses LED technology effectively and provides a quick glimpse into the country.

Art installation on display inside the Philippines Pavilion
All photos courtesy of Paul Williams

Japan

The Japan Pavilion is a complex, emotionally-charged 60-minute tour through a variety of technology-enhanced environments, and frequently sports a hefty queue for entry (but it's worth it). The experience is representative of both Expo and Japanese culture and is difficult to encapsulate in a brief summary. [For a detailed review of the Japan Pavilion, listen to the free InPark Tracks Podcast #22, available wherever you listen to podcasts.]

Kazakhstan

First impressions of the Kazakhstan Pavilion lead visitors to believe it's a fairly traditional experience, but just when you think the pavilion is finished, there's a surprise show at the end. Slightly reminiscent of the long-gone Bird and the Robot show at Epcot, a giant robot arm interacts with a live dancer in a mesmerizing choreographed ballet. This is easily the most interesting and unusual live entertainment experience in a pavilion.

Kingdom of Saudi Arabia

As one of the legacy buildings expected to remain after the Expo, Saudi Arabia delivers both outside and inside the pavilion. Recognized with world records for its giant LED mirrored screen and in-ground LED grid, the building is literally a dynamic piece of art. Inside, a series of exhibits blend projection technology, LED screens and



Human and robot interact in a choreographed ballet performance at the Kazakhstan Pavilion.



Lifelike figures are a part of Alif - The Mobility Pavilion.

crisp media to create stunning visuals and environments. [For more on the KSA Pavilion, see our article in this issue, p. 32]

Mobility: Alif

Expo features three thematic pavilions: Mobility, Sustainability and Opportunity. As the most immersive of the three, Alif's environment at times feels like a walk-through version of Spaceship Earth (EPCOT) with detailed human figures, theatrical lighting and highly themed sets. Perhaps the most photographed scene at Expo is of the three giant-sized ancient travelers in this pavilion. From this recreation of the past, the pavilion transitions to the present with a showcase on AI and the current state of technology. The pavilion ends with an optimistic look at the future of cities, reminding us that the future is not only about advancing technology but also about creating happiness.

The Netherlands

This very well executed exhibit showcases Dutch ingenuity in environmental technology. Entering a towering cone, guests are given white umbrellas. An individual show is projected onto each umbrella, demonstrating how the pavilion is actually an experiment in sustainable living in desert environments.

Pakistan

This delightful pavilion expertly combines scenic art pieces with projection, audio, scents and special effects to create a brief tour through Pakistan. It's warm and architecturally interesting and helps broaden one's perception of the country.

The Philippines

Sometimes art is the only thing you need. The Philippines pavilion brings together several installations from Filipino artists that relate back to the country and to Expo's theme. It conveys ideas by making visitors think – it's straightforward and enjoyable.

Russia

While the Russia Pavilion doesn't present a particularly strong overall narrative experience, it is architecturally fascinating and hosts one of the more notable projection mapping shows at Expo. The dome of the pavilion is home to a giant human brain that is illuminated through projection mapping, lighting effects and



A digital forest comes to life as a part of Terra – The Sustainability Pavilion.



A welcoming smile can be found at the entrance of the Thailand Pavilion.

music. Also of interest is a small show located behind the brain that features two robotic arms with LED cubes that interact with one another.

Spain

Definitely one of the more artistic pavilions, guests first walk down a circular ramp around an interesting Möbius strip sculpture that is “activated” by people moving their hands under the railing. This is followed by a short film about people working together to restore balance in nature. Finally, guests walk through a forest at nighttime — full of smells, lights, floor projections, and interesting exhibits on sustainability.

Sustainability: Terra

Huge and architecturally interesting, Terra offers two similar experiences based on themes of the forest and the sea. With

fantastic scenic design and simple, effective interactives it’s an exhibit that rivals some of the best museums in the world. If time is limited, choose forest over sea.

Thailand

The Thai pavilion delivers in and out. An entertaining outdoor show draws guests inside to the main event where two anime characters take visitors through three shows. The first theater has guests looking down at a mist-covered pond. Fountains emerge from the water and spell out words. Next, a 360-degree theater takes guests in a virtual drone around Thailand. Finally, an upside-down LED pyramid shares messaging from Thai corporations.

United States of America

Perhaps most known for the conveyor-belt ride at the start of the pavilion, the most interesting show elements are found right after exiting the conveyor belt. A large auditorium features layers of screens and projection in a multimedia show that includes giant set pieces flying in over the audience’s heads. [To go deeper into the USA Pavilion, see our article in this issue on p. 22]

Vision Pavilion

Easily overlooked, this pavilion highlights the life and vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai. Presented with a fond appreciation for His Highness, the projection mapping experiences in the pavilion are impressive, bringing a large marble horse statue to life and illuminating a platform of kinetic tabletop blocks. • • •



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Pavilion of possibility

Kraftwerk Living Technologies supplies innovative, interactive AV to the Saudi Arabia Pavilion at Expo 2020 Dubai

by Martin Palicki

The giant monolith sticking out of the ground at a 24-degree angle is a beacon, drawing visitors closer. In addition to being visually arresting, the Kingdom of Saudi Arabia (KSA) Pavilion houses a suite of immersive technologies, shatters several world records and is one of only a handful of legacy buildings slated to remain beyond closing day at Expo 2020 Dubai (October 1, 2021-March 31, 2022).

Designed by Boris Micka Associates, the building's architecture beckons people into the pavilion, but it's the technology that keeps them engaged. Kraftwerk Living Technologies (KLT) performed the role of AV integrator and was responsible for the design of all the pavilion's audiovisual systems from concept to completion.

KLT Middle East Managing Director and KSA Pavilion Operations Manager Stuart Taylor was proud of not only the design of the AV systems, but their reliability as well. "We were very thoughtful in the technology we chose," says Taylor. "We relied on our experience and put equipment through rigorous testing during the design phase."

According to Taylor, the building's AV systems are controlled by the Brainsalt server system, in partnership with Crestron. All media content, tracking and auto-alignment of projectors

is handled by Brainsalt servers. Over 30 media servers are used throughout the pavilion.

Outside wonders

Plaza Square, located below the angled building and adjacent to the KSA Pavilion entrance, provides an outdoor experience for visitors to the pavilion. This area boasts two Guinness World Records that KLT was directly involved in:

- Largest interactive LED lighting display (7,798 RGB LED lights with IR technology utilizing tracking cameras to respond to movement from people walking above)
- Largest mirrored LED screen (directly angled above the LED floor is a 1,302.5 square-meter LED screen behind a glass mirror; the effect allows reflections from the LED floor to blend with images behind the mirror)

Plaza Square also serves as a location for cultural events and dances. KLT helped integrate into the building a special AV system to support these special events. Around the edges of the mirrored LED screen a channel houses the sound system and 24 Robe I-pointe intelligent light fixtures, built on a custom-engineered frame that moves the lights out of view when not being used.

Interior delights

Once inside, guests pass in front of a 22-meter long standard 2.5-mm LED curved screen, showing panoramic scenes from around Saudi Arabia. From here guests proceed up a long escalator through the Heritage section of the pavilion. The escalator passes by scaled buildings and scenes from old Saudi Arabia. A series of Barco F90 projectors provides spots of projection throughout the built scenes, showing people gathering in storefronts, dancing, etc.

Stepping off the escalator guests are at the top of the building in an exhibit room titled "Land and People." A walkway passes between a curved LED wall of 266 sqm and a concave LED screen "dish" on the floor of 108 sqm and 12-meters diameter. The 2.5 mm LED wall and the 3 mm concave screen show scenes from locations in Saudi Arabia. The wall shows the view forward and the dish shows the view below, giving guests the sense that they are moving over the landscape. From certain vantage points, it appears that the walkway is actually a bridge. A smaller screen on the side indicates what area of the country is being depicted.

Guests proceed down another long escalator to the ground level. This future-themed area takes guests past renderings of a forward-looking Saudi Arabia. KLT installed 31 Barco



Ascending past scaled buildings from old Saudi Arabia



In the Vision area screens, mirrors and projectors work in tandem to create a spherical illusion.



Above: The "Land and People" area of the pavilion uses curved LED screens to immerse guests in the beauty of Saudi Arabia.

Opposite: The Guinness World Record-breaking entrance to the Kingdom of Saudi Arabia Pavilion at Expo 2020 Dubai

All photos © ALEC & ALEC FITOUT



Descending the escalator, guests are surrounded by projected scenes of KSA's futuristic ideas.

F70 projectors to create continuous images on both sides of the escalator. Taylor's team took care to mount the projectors to keep the imagery free of shadows from architectural components.

At the bottom of the escalators, guests round a corner and enter the Vision area, one of the pavilion's most arresting scenes. Guests see what appears to be a 40-meter diameter globe, coupled with an interactive projection-mapped floor. In reality, a small convex screen (created with positive air pressure from three fans) is illuminated by two Barco F80 projectors. A series of mirrors surrounding the small screen create the whole globe image with a kaleidoscope effect. Above, 14 additional projectors cover the floor in imagery. Tracking cameras enable real-time reaction to guest movement.

After exiting outside, guests proceed down a spiral staircase to a garden area. On this lower level they can enter the large Discovery Center, designed to highlight specifics about KSA's

future plans. The centerpiece is a 14x12-meter touch table with 42 positions that can be occupied at the same time and 20 projectors overhead to cover the entire table.

Since this space is directly beneath Plaza Square, a series of acoustic dampeners installed in the truss system minimize vibrations from movement above.

The Kraftwerk Living Technologies team

During the peak of construction, KLT had over 50 technicians and engineers working on the pavilion. The Austria-headquartered company has a regional office in Dubai which supported this project, along with other Middle East projects.

"We have a history of creating theme park attractions," says Taylor, "but we also excel at these technically-challenging projects outside the typical theme park space."

During the Expo, Taylor had a team of 12 operating and maintaining the KSA pavilion's technology systems, ensuring everything was show-ready by the 10 a.m. Expo opening.

Taylor was touched by all the visitors and their reactions to the KSA Pavilion, but one category of visitor in particular made him most appreciative.

"We've had hundreds of thousands of school children visit Expo. They are our future, and I'm excited to share with them everything I've learned over the years," he explains. "So when I see a kid's face light up and they ask, 'How does that work?' I am so happy to share this technology with them." •••



In the Discovery Center, guests encounter a 14x12-meter touch table that up to 42 people can use at a time.



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Back to Japan

Expo 2025 will build on Osaka's world's fair legacy

by James Ogul

On March 31, 2022, Expo 2020 Dubai will close, having completed its six-month run. Expo 2020 Dubai (delayed by the pandemic, the event retained its original “2020” name) was the first world’s fair hosted in the Middle East and North Africa (MENA) region. It was a large-scale World Expo, registered by the Bureau International des Expositions (BIE). The larger, six-month world’s fairs occur every five years, and the next is currently taking shape in Osaka, Japan. Expo 2025 Osaka Kansai will run from April 13 to October 13. Its theme is “Designing Future Society for Our Lives.” Organizers have projected some 28 million visits. More details of Expo 2025 appear below — but first, a little history.

Osaka has a distinguished record as a world-class event host, having previously hosted a major world’s fair in 1970 with a considerable legacy, as well as the 1990 International Garden and Greenery Exhibition, which although not officially a world’s fair had the elements of one. Here is a look at both.

Osaka Expo 70: Progress and harmony

From March-September 1970, Osaka presented the first world expo hosted in Japan and Asia. Under the theme “Progress and Harmony for Mankind,” there were 77 participating countries and more than 64 million visits, setting an expo attendance record that stood for four decades. The record was finally broken by Shanghai Expo 2010 which received some 73 million visits.

The Osaka ’70 expo grounds had a central Symbol Zone with moving walkways extending out to 116 international and



The Tower of the Sun from Expo '70. Photo courtesy of Osaka Prefecture Japan World Exposition Memorial Park Office.

corporate pavilions. Presiding over Harmony Plaza was the centerpiece of the Expo, the 230-foot-tall Tower of the Sun, designed by Tarō Okamoto. The Tower was to be torn down after the exposition, but was saved by a preservation campaign and today lives as the Tower of the Sun Museum in the Expo '70 Commemorative Park, open to the public on the original site of the fair. The structure was officially registered as Tangible Cultural Property of Japan in 2020 to mark the 50th anniversary of the Expo.

In an article published on the BIE website, Shinya Hashizume noted, “The Expo 1970 site was designed to play the role of a testing ground for ambitious social experiments. A Symbol Zone, one kilometer long and 150 meters wide, was constructed in the center of the site and filled with structures including the Festival Plaza, the Tower of the Sun, the Theme Pavilion, and the Expo Tower. Moving walkways extended in all four directions from this zone. Much was made of the country pavilions such as that of the United States, which featured the actual lunar module and rocks brought back from the moon, and the Soviet Union, which boasted displays of Lenin and the Soyuz spacecraft. Also well-received were productions such as the Netherlands pavilion’s multiple image displays and the Joint Scandinavian pavilion’s slide shows, which were projected onto blank papers with visitors’ fingertips. Meanwhile, the corporate pavilions competed with



A rendering of the Expo 2025 Osaka Kansai site. Photo courtesy of Sou Fujimoto Architects.

new experimental video displays such as huge screens, multi-screen displays, and the projection of images onto a veil of smoke.”

Osaka 90: Flowers and pavilions

Two decades after Expo ’70, Osaka stepped up again, this time to organize and host the International Garden and Greenery Exposition with the theme “Harmonious Coexistence of Nature and Mankind.” The event took place under the umbrella of the International Association of Horticultural Producers (AIPH) which since 1960 has collaborated with the BIE to organize world horticultural expos. Because of this relationship, Osaka 1990 was in a position to leverage international participation at the federal level, comparable to a world’s fair. The six-month event ran from April to September with participation from 83 countries and 55 international organizations and attendance of more than 23 million visits.

One aspect that really set the event apart from traditional horticultural shows was the corporate area where large Japanese corporations displayed futuristic technology. As Peter Grill reported in an April 15, 1990, article in the *New York Times*, “The most popular sector of the fair is inevitably the City Area, where long waiting lines surround the score of pavilions erected by Japan’s leading corporations and industrial groups. The fanciful design of most of these pavilions is dictated both by the technology contained in them and the horticultural theme of the Expo: the Mitsubishi Pavilion, for example, represents a huge sprout bursting from the earth; the Hitachi Pavilion, a chestnut tree; and the Japanese Gas Association Pavilion, a range of tree-covered mountains. Entering the fantasy worlds within these structures, visitors find themselves transported millions of miles into space or into the microcosm of a living plant cell. Computer graphics, 3-D IMAX and high-definition imaging systems provide a variety of visual and aural experiences for patient visitors willing to endure the long waiting lines. Word has quickly spread that among the most exciting of these displays is the Suntory Pavilion, with its extraordinary 3-D IMAX film of the North American wilderness, ‘The Last Buffalo.’

“Hour-long lines outside the Fujitsu Pavilion also attest to its success. Inside, visitors are suspended within a dark spherical space while 360-degree IMAX projections illustrate the theme of ‘Light, Green and Life,’ a magical rendering of the functions of sunlight and chlorophyll in sustaining all earthly plant life.”

Expo 2025: “More than an event”

Organizers of Expo 2025 Osaka, Kansai expect some 150 countries and 25 international organizations to participate. As of January 2022, at least 72 countries had confirmed participation — including Germany, Greece, Italy and France as well as many states from Africa and South America — and six international organizations.

Apart from the main theme, Expo 2025 is set to feature subthemes “Saving Lives,” “Empowering Lives,” and “Connecting Lives.”

The expo will be held in Yumesshima, an artificial island located in Osaka Bay. When all the landfill is completed the total area will be 390 hectares.

The construction budget is estimated at \$1.7 billion (one-third to come from the Japanese government, one-third from local government, and the rest through the private sector including business organizations). The operational budget is expected to be around \$800 million to be funded through ticket sales.

On February 15, 2022, the BIE and the Government of Japan signed an Expo 2025 Osaka Kansai See Agreement which serves as a legal framework to guarantee the privileges and conditions for official participants in the next World Expo.

The agreement was signed by the Secretary-General of the BIE, Dimitri S. Kerentzes, and the Ambassador of Japan to the United Arab Emirates, H.E. Akio Isomata. The Secretary-General of the BIE indicated: “The See Agreement brings the formal partnership between the BIE and the Government of Japan to a whole new level and will establish the legal framework for international participants. This agreement thus marks a new milestone in the journey towards the realization of an inspirational and globally inclusive World Expo that brings countries together to design a shared future society.”

Manatsu Ichinoki, Vice Secretary-General, Japan Association for the 2025 World Exposition, who attended Expo ’70 in his youth, commented on how Osaka’s expo history is an influence for the vision and theme of Expo 2025.

“The theme of Expo 2025 is ‘Designing Future Society for Our Lives,’” he said. “By cooperating with countries and international organizations participating from around the world, we would like to create new values by demonstrating new technologies and systems related to ‘life’ at our Expo and implementing them into society.”

Ichinoki spoke of empowerment: “With its theme, ‘Progress and Harmony of Mankind,’ Expo ’70 Osaka let visitors feel a bright future through exciting experiences. As a school student, I was very much impressed with its exhibition. For Expo 2025, we expect that even before the Expo opens, various participants will come together on and off the site with their technologies, ideas and initiatives related to ‘life’ to contribute to the achievement of the SDGs [sustainable development goals] set by the United Nations.

“The Expo will offer visitors an opportunity not only to explore and observe, but also to take action themselves toward a sustainable future society. Thus, Expo 2025 will be more than an event in 2025. It will give courage and power to visitors for the future, as well as for the future generation at home and abroad. We look forward to meeting and working with the world toward Expo 2025.” • • •

Technology updates

Joel St-Denis of Christie talks about the latest AV tools

interview by Judith Rubin

In his role as Director of Project Management, Joel St-Denis brings more than 20 years of experience in software, video and projection to Christie. Since joining Christie in 2007, St-Denis has successfully launched and supported several products and software releases that meet the technical and business requirements for fixed and rental staging-type installations. His role also involves conducting market research and developing a strategic direction for these supporting products and software for Christie's business line of projectors to ensure that these solutions meet the needs of the AV industry.

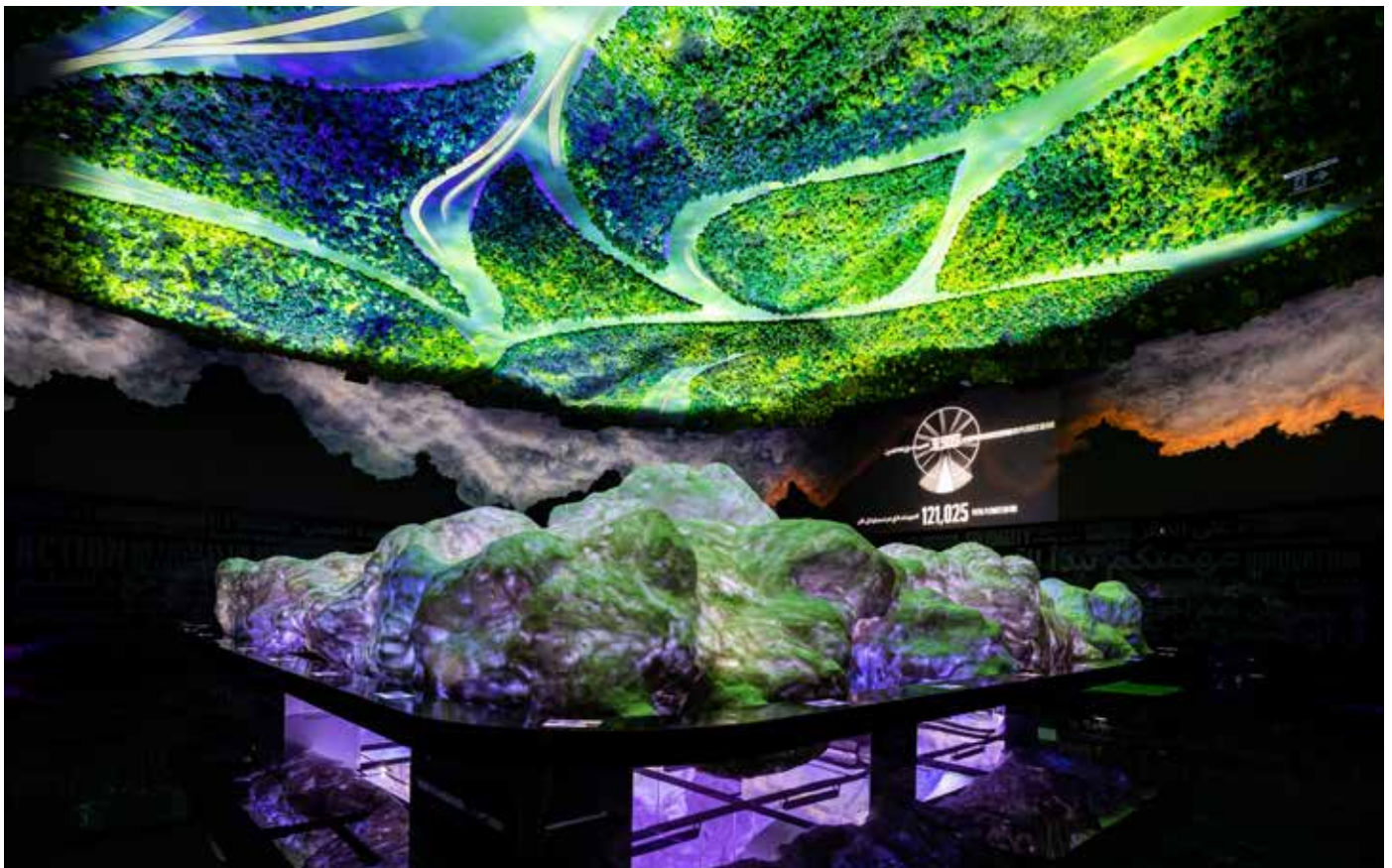
What are you seeing in your role at Christie that's going to impact the attractions and live events industries in the near future?

As a Product Manager in the AV industry, one of the most important aspects of my job is getting out and seeing customers,

attending trade shows, and experiencing firsthand how our products are being used, something which has been challenging for the past two years. The silver lining of having traveled much less has been the ability to focus more on the new products we are bringing to market in 2022, and many of them are directly aimed at themed entertainment and live events. As the pandemic restrictions continue to ease, we are seeing a lot of demand for our latest 3DLP RGB projectors and software, including Mystique and Pandoras Box. I am personally looking forward to getting back into the field and showcasing these new products.



Joel St-Denis



Above and opposite: More than 70 Christie® laser projectors are helping to inspire visitors in Mission Possible – The Opportunity Pavilion at Expo 2020 Dubai. Photos courtesy of Suneesh Sudhakaran/Expo 2020 Dubai



Regarding Christie products and some of the latest innovations, what would you like integrators to know?

Many new integrators now working with Christie are surprised to discover we have our own internal teams dedicated to helping them with proposals for complex AV systems. We have been working internationally with integrators for over 15 years and have been involved in hundreds of multi-projector proposals from initial concepts all the way to assisting with final installation.

What should creatives pay attention to?

As a creative person looking for projection as a medium, you should know that Christie has the widest range of RGB pure laser 3DLP projectors on the market. These projectors are the only illumination technology that approaches the full Rec. 2020 color gamut, giving creative folks the ability to imagine, create and display content on a projector in ways it has never been seen before. The difference between traditional projectors and RGB pure laser projectors must be seen in person to be truly appreciated. If you get a chance to attend ISE or InfoComm 2022 be sure to come visit the Christie booth (Hall 3, stand 3K600 and N2145 respectively) to see this with your own eyes.

What are some of the important tools for projection mapping, interactive experiences, smaller spaces, and branded or IP-centered media?

I always like to tell people one of the coolest things about working at Christie is we are one of the only projector companies who has taken a holistic approach to working with our customers.

We understand that complex interconnected AV systems are required to deliver an engaging experience in dark-ride theme park attractions or large-scale projection mapping, and for this reason we offer more than just displays. We have software solutions such as multi-channel media servers capable of playing back content at 4K60 while also offering the ability for live interaction through motion detection. We offer camera-based projector alignment software to ensure that projectors are always perfectly aligned. And finally, our fulfillment team are experienced field techs that will work alongside integrators at the planning and deployment stage of complex systems to deliver a dependable solution.

In AV technology, is there an “elephant in the room” that many people are overlooking?

I have been in the AV industry for 20 years, and I can honestly say, content and setting up an ongoing content strategy is often underestimated or simply overlooked beyond day one. For example, one of the most satisfying and entertaining experiences in AV is watching a projection mapping show on a large-scale building; people will stand in one place in awe for several minutes watching a beautiful colored display. Many of the projection mapping installations are installed on a permanent basis and repeat visitors will grow tired of watching the same content over and over. Permanent large-scale projection mapping is typically a considerable financial investment, and it is important to budget for an ongoing strategy to keep the content fresh and engaging.

...



The slogan of the Peanuts Hotel is a Snoopy quote: "It's nice to have a home where your guests feel comfortable."
All photos courtesy Peanuts Worldwide

Enjoying Peanuts

The beloved global brand continues to grow on LBE platforms

by Wendy Grant and Judith Rubin

If you grew up following the adventures of Charlie Brown, Snoopy and their friends in the comics, it might surprise you to learn that Gen Zers — who have likely never held a physical newspaper — are sporting personalized Peanuts Swatch watches and coveting Peanuts x Marc Jacobs sweatshirts. On social media, Snoopy is hard to beat: Peanuts has over 17 million fans across its platforms, with high levels of engagement. More than 70 years after its debut, the brand born from Charles M. Schulz's 1950 comic strip remains beloved around the world and true to its original spirit.

Every generation has embraced Peanuts. Its stories, themes, settings and the characters themselves readily lend themselves to licensing on a wide range of platforms, from merchandise and consumer products to media and live shows, holiday celebrations and hospitality, theme park lands, FECs, Chinese lantern festivals, pop-up experiences, and other forms of indoor and outdoor location-based entertainment (LBE).

"As we look to the brand's 75th anniversary in 2025, LBE is a key category for us, helping to keep Peanuts the beloved family

tradition that it has been for generations," says Tim Erickson, EVP Peanuts Worldwide. "As a multi-generational family favorite, with innumerable themes from sports to holidays, outdoor adventures to space travel, Peanuts is a natural fit for a wide range of experience-based opportunities."

"The Peanuts characters are iconic and the stories are timeless. The Peanuts world is welcoming, comfortable and relatable," says Craig Herman, Vice President of Global Brand Experiences and Publishing for Peanuts Worldwide LLC. "Peanuts gives our partners the opportunity to tell so many stories — from Charlie Brown pining for the Little Red-haired Girl to the gang playing sports like baseball and football to Snoopy's adventures as Joe Cool and the World War I Flying Ace."



Craig Herman, VP of Global Brand Experiences, Peanuts Worldwide

Retailers, manufacturers and licensees seeking new LBE opportunities can meet with Herman at Licensing Expo 2022 (Las Vegas, May 26-24), where Peanuts is an exhibitor.

While Snoopy and the gang have become a global brand, licensing partnerships are selected and curated with care to avoid oversaturation. “We recognize that Peanuts has a special relationship with the fans, for whom in many ways, the Peanuts characters have become longtime friends,” says Herman. “We place a high value on that.”

“Peanuts is dedicated to long-term relationships,” says George Wade, President of Bay Laurel Advisors, who along with Herman helped set initial strategy and implementation for the Peanuts LBE expansion. “This is a brand that brings so much value to its partners. The brand is continuing to grow, while retaining its core values.”

Theme parks, FECs and more

Syracuse University professor Robert Thompson, founding director of The Bleier Center for Television and Popular Culture, described Peanuts as “arguably the longest story told by a single artist in human history” on PBS NewsHour. From Schulz’s heartfelt and heartwarming story, told over five decades through nearly 18,000 comic strips, sprang its iconic characters and distinctive phrases such as “security blanket” and “Good grief!” that have become part of the global vernacular. Peanuts became a part of popular culture — and never left.

The characters are a key attractor for families with young children. People who grew up snuggling a Snoopy plush or carrying a Charlie Brown lunchbox are now taking their own kids to Snoopy-themed lands at Cedar Fair parks throughout North America. Peanuts began expanding into the LBE space in 1983, when Camp Snoopy first opened at Knott’s Berry Farm. In 2017, 20 years after Knott’s was acquired by operator Cedar Fair, the licensing agreement was extended, allowing the iconic characters to be featured exclusively throughout Cedar Fair’s 11 amusement parks in the US and Canada through 2030.

Cedar Fair expanded its Peanuts-themed Camp Snoopy children’s area at Carowinds with a new climb-and-play area and five rides shortly after the licensing extension was announced. In addition to the Camp Snoopy and Planet Snoopy children’s areas, there are value-added options: seasonal events such as The Great Pumpkin Fest, character breakfasts, etc.

Snoopy and Universal Studios Japan (USJ) in Osaka have also enjoyed a longtime partnership since USJ opened in 2001. Snoopy’s Sound Stage Adventure and The Flying Snoopy ride are key features in the Universal Wonderland family area.

Herman said, “The solidity and longevity of the partnerships with Cedar Fair and Universal Studios Japan are very telling of the strength of the Peanuts brand. Peanuts can help operators deliver great and unique guest experiences. It makes good business sense.”

Building further on the brand’s synergy with LBE platforms and leisure markets, for several years Peanuts has had a presence at the IAAPA Expo, the world’s largest amusement industry gathering, where in 2021 some 200 industry leaders attended an invitation-only Peanuts spotlight presentation by Herman.

“Peanuts is very popular around the world, particularly in Europe and Asia,” says Herman, “and the Middle East, too.” Just as Snoopy and friends are a proven draw for theme parks, there are opportunities in international markets for Peanuts to anchor family areas, including retail, dining and family entertainment centers (FECs).

The opportunities don’t stop there. “New models are waiting to be created, and the adaptability of Peanuts to a wide range of entertainment and educational experiences is proven,” says Herman. “We’re always looking for good partners and interesting collaborations.”



Peanuts is a natural fit for outdoor settings. Snoopy Garden in Jeju, South Korea, includes Warm Puppy Lake, where guests can commune with nature, Snoopy-style.

Kilburn Live's new traveling LBE adventure, featuring Snoopy

The newest offering from the Peanuts gang is an immersive experience, “The Search for Snoopy: A Peanuts Adventure,” developed by Kilburn Live. The 20,000 square-foot experience will premiere in May in Honolulu, Hawaii, at the Ala Moana Center before traveling to the mainland for visits to cities throughout the U.S. and Canada. Mark Manuel, CEO of Kilburn Live, shares, “This is the creation of a fictional world in the real world.” It allows fans to enter the Peanuts neighborhood to explore iconic locations from the beloved comic strip as they uncover clues to help Charlie Brown find Snoopy. Visitors can look forward to visiting Snoopy’s doghouse and Lucy’s psychiatric help booth. But it’s not just an awesome, Instagrammable walk-through. “The Search for Snoopy is highly interactive,” says Manuel.

For instance, in the classroom are two microphones — one at a height for adults and one at a lower height for children. “If a child talks through the kid’s mic, it just sounds like their normal voice,” says Manuel. “But when an adult speaks into the adult mic, it sounds like, ‘Wah wah wah wah,’” he says, imitating the distinctive noise that Peanuts fans will instantly recognize as the sound of an adult talking in the Peanuts world. (That sound was created for the first Peanuts holiday special by playing a tuba muffled by a plunger, at composer Vince Guaraldi’s suggestion.)

Manuel shares that the experience of bringing the Peanuts world to life has been highly enjoyable. “Working with Peanuts has been great. They know and treasure the brand, as they should, but they’re adventurous, too,” he says. “That longevity of more than 70 years means this is a brand that’s multi-generational. And people all over the world love Snoopy.”

In Asia, hospitality and the great outdoors

Hotels and attractions are finding that Charlie Brown and friends can increase bookings and sales. After all, would you rather book a standard hotel room or a Snoopy-themed hotel room? Guests are excited to choose Peanuts in Taiwan and Japan. Herman explains, “We can bring demonstrated value to the hospitality sector, specifically resorts and hotels. You can be confident that Peanuts is going to be able to deliver consumers to your front door.”



Peanuts-themed rooms are a popular choice at the Fame Hall Garden Hotel at Taiwan's Baseball Hall of Fame.

An entire hotel in Kobe, Japan — The Peanuts Hotel — is dedicated to Snoopy and crew. It spans three stories, with every room decorated to portray a different Peanuts comic. For instance, the comic that shows Snoopy dragging a typewriter atop his doghouse and typing the well-known line, “It was a dark and stormy night,” is brought to life in a room fit for a budding writer, complete with a typewriter and a corkboard wall featuring Schulz’s artwork. The hotel’s website invites guests to experience the world that Schulz created “which is enjoyable for anyone at any age.”

Although Charlie Brown’s dysfunctional baseball team were more lovable losers than homerun heroes, they are a key feature of Taiwan’s Baseball Hall of Fame & Fame Hall Garden Hotel, which opened in 2019. Interactive Peanuts-themed skills-building games are featured in the Hall of Fame, and the hotel offers 20 Peanuts-themed rooms. “Originally 10% of the rooms were planned to be Peanuts-themed,” says Herman, “but due to their popularity, that was expanded to 20%.”

In addition to drawing fans indoors, Peanuts can enhance an outdoor experience. Snoopy Garden opened on Jeju Island in South Korea in 2020. The characters fit seamlessly into the tranquil, 20-acre nature space. Visitors can sit on a dock with Snoopy at Warm Puppy Lake (because, after all, happiness is a warm puppy), await greatness at the Great Pumpkin Patch, or curse the kite-eating tree at the visitor center.

Herman says, “We’re looking for partners who are dedicated to good storytelling. Ultimately, we want the guest to have a great experience.”

Celebrating the holidays — and an anniversary

The Peanuts world continues to grow, evolve and thrive. The Emmy-winning TV special “A Charlie Brown Christmas” premiered in 1965, and the resulting association with Peanuts and the holidays continues to this day. The popular Peanuts Christmas Experience with Santa has traveled to Centennial malls during the holiday season for the past three



The Peanuts Christmas Experience at Centennial malls

years, making a visit to Santa even more magical. The walk-through experience features life-size characters and interactive stops, including Lucy's Holiday Help booth, a musical light-up Christmas tree lot, and an LED-activated dance floor. In December 2021, the touring stage show "A Charlie Brown Christmas Live!" debuted in New York City, setting the stage for a longer run in the future.

Peanuts celebrated its 70th anniversary in 2020 with special merchandise ranging from Hallmark figurines to Timex watches, and fashion collaborations with Scandinavian fashion house Soulland, French retailer Cyrillus, and Brazilian clothing company Mar Quente. Retro appliance maker Smeg even released 70 limited-edition refrigerators featuring Snoopy. North American dog daycare provider Dogtopia celebrated Snoopy throughout its more than 130 locations with a special Snoopy birthday party, a Snoopy lookalike contest and other fun activities.

Apple TV+ and astronauts

On Apple TV+, the adventures continue with original new animated series. The Emmy-nominated "Snoopy in Space" began its second season in November 2021, and season two of "The Snoopy Show" began March 11, 2022. "'The Snoopy Show' and 'Snoopy in Space' are helping to reach new audiences and create new fans," says Herman. "In addition, Apple TV+ will debut four new family specials alongside the family classics."

Apple TV+ also features a playful, short documentary starring Ron Howard and Jeff Goldblum: "Peanuts in Space: Secrets of Apollo 10." This Emmy-winner delves into the question: Was Snoopy a top-secret astronaut?

The relationship between NASA and Peanuts is of long standing: NASA used Schulz's artwork in the 1960s when space exploration was a new and potentially scary topic. Connecting with the comforting Peanuts characters helped inspire excitement about America's space program. Snoopy was used on internal material for NASA's spaceflight safety initiative and for Apollo 10.

In the continuing collaboration between NASA and Peanuts, Snoopy soon will serve as the zero-gravity indicator on Artemis 1, slated to launch in the spring,

which is NASA's first big step toward returning astronauts to the Moon.

"All of these new adventures for Peanuts offer new entry points for fans and provide new opportunities for partnerships," says Herman.

In his final Peanuts comic strip, Schulz wrote, "I have been grateful over the years for the... wonderful support and love expressed to me by fans of the comic strip." There's no doubt he would appreciate the joy Snoopy, Charlie Brown and the rest of the gang continue to share with the world. Peanuts is looking ahead to celebrating 75 years of friendship in 2025 with exciting new partnerships and projects to come. • • •

For more information or to set up a meeting:
www.Peanuts.com
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At Licensing Expo 2022, visit Peanuts in
 Booth #G204



Wendy M. Grant has worked in marketing for more than 25 years. She served as Director of Marketing and Communications for San Diego's Fleet Science Center; home to the world's first IMAX Dome

Theater; where she directed marketing for all exhibitions, films, shows and events for 13 years. She served on the Marketing Committee for the Giant Screen Cinema Association and she was a board member for the Giant Dome Theater Consortium. Prior to working in the museum field, she was Director of Marketing at Marine Corps Air Station Miramar where she helped to produce the annual Miramar Air Show. Since 2019, Grant has worked as a communications consultant, writer and editor; with clients in the education and entertainment fields.



All hands on deck aboard *Star Wars: Galactic Starcruiser*!

Inside Disney's *Star Wars: Galactic Starcruiser*

article and photos by Martin Palicki

“It’s not a hotel,” Ann Morrow Johnson states firmly, referencing *Star Wars: Galactic Starcruiser*. “It’s a first-of-its-kind vacation experience.” The Disney Executive Producer and Executive Creative Director has been working on developing the Galactic Starcruiser for over six years, designed alongside and in concert with the *Star Wars: Galaxy’s Edge* land at Disney’s Hollywood Studios theme park in Orlando, Florida. But what kind of vacation experience is she actually talking about?

Drawing heavily on the concept of an oceanic cruise, Galactic Starcruiser is much more than just a journey through outer space. At its heart it is immersive theater writ large — a story set in the world of *Star Wars* that plays out over the course of two nights and a day and a half of action. It’s hard to imagine any other experience that comes close to this level of detail, interactivity and length of time.

The Galactic Starcruiser brings together the best parts of cosplay, interactive gaming, escape rooms, advanced technology and special effects, all under the banner of the Disney-owned *Star Wars* IP. In a way it’s like an intergalactic version of a renaissance faire, where the lines between actor and audience are blurred, inasmuch as each audience member wants it to be.

Technically, Galactic Starcruiser also provides the essential services of a hotel: comfortable lodging, delicious food, luxury

retail and entertainment — though they are so wrapped up in the themed and narrative elements of the experience, it’s understandable why calling it a hotel would be unfair.

Understanding the story

According to Scott Trowbridge, Portfolio Creative Executive at Walt Disney Imagineering, the Galactic Starcruiser “was designed for people who love *Star Wars*, and for people who love people who love *Star Wars*.” That feels true. Someone ignorant of or disinterested in the *Star Wars* story could easily get pulled into the deep narratives surrounding them, or they might not and choose to simply enjoy the environment and perks of a two-night getaway. Nevertheless, having at least a basic understanding of *Star Wars* lore makes a big difference in appreciating the full experience. Depending on which category you fall into, the following may or may not make sense.

As the story goes, guests who are booking the *Star Wars: Galactic Starcruiser* are actually booking a two-night stay aboard the Halcyon starcruiser, a luxury vessel providing a relaxing cruise around the galaxy.

Guests arrive on the afternoon of day one to the entry terminal, a concrete entrance both futuristic and brutalist in form. Valets take their bags and guests proceed down a long hallway to a launch pod that takes them directly up to the

Halcyon spaceship. The pod doors open to the ship's main atrium, a two-story space that serves as a central gathering place during the trip. The launch pods are located at roughly four o'clock. Five to seven o'clock is the ship's bridge — a window-filled room looking out onto the galaxy and an important location throughout the trip. At nine o'clock is the ship's bar and lounge. A staircase at ten o'clock goes up to a mezzanine balcony, inaccessible to guests. Elevators to the sleeping cabin levels and the dining hall level (and other mysterious places on the ship) are at the top of the room. A small gift shop can be found at one o'clock, and a snack bar, well stocked with complimentary inter-planetary delights, is at three o'clock.

Once all guests are safely aboard the Halcyon, the first of several group events occurs. The ship's Captain and Cruise Director appear on the balcony above the atrium and welcome guests aboard. Hapless ship mechanic Sammie also makes an appearance, advising that the ship has been boarded by the First Order, and the pleasant cruise around the galaxy suddenly becomes more complicated. The First Order is certain there are Resistance sympathizers on board and the meta-story for the rest of the cruise becomes the essential *Star Wars* trope of good (Resistance) versus evil (First Order). What happens next is largely up to how involved each guest wants to become in the narrative and how they choose to experience *Star Wars: Galactic*

Starcruiser. Which side each guest chooses to align themselves with will lead them down drastically different paths, all of which converge in a grand finale scene at the end of night two.

Understanding the experience

To better understand Galactic Starcruiser, it's important to know the various components of the experience and how they all work together to produce a truly immersive world for guests to inhabit. Each element is saturated with story — both in terms of theming and content — for guests to explore.

Ship spaces

The Halcyon is equipped with many standard cruise ship components, including the aforementioned atrium, which serves as the theatrical space for both the welcome and finale events, as well as other story-specific moments.

The Crown of Corellia Dining Room offers buffet breakfasts and lunches as well as two scheduled table-service dinner times. Guests enjoy a live concert performance from intergalactic superstar Gaya on the first night of the cruise. Dinners tend to be interrupted by interludes from the Captain, stormtrooper entrances, or other narrative-driven events.



Who's that Wookiee?



Comfortable accommodations for travel across the galaxy



The bridge of the Halcyon



The atrium of the Halcyon starcruiser

A rather ingenious design innovation is the Climate Simulator room, an advanced simulation area of the ship created to replicate the climate of the planet guests are about to visit, in this case Batuu. Since Batuu's climate conveniently seems to mirror that of Central Florida, so does the Climate Simulator room. In other words, it's an outdoor courtyard and a nice escape from being in the darkness of space for extended periods.

The Sublight Lounge offers a place to gather and sip on some of the galaxy's more interesting libations or sit and play at the holo-sabacc table, a holographic card game.

The final regularly accessible location is each guest's cabin. Although the ship contains several larger suites, the majority of the lodging cabins feature a well-designed room that can sleep up to five with viewports that look out into space. The view is rendered in real-time so that if the ship goes into hyperspace, or if it enters an asteroid field, guests will see that through their



The Climate Simulator, recreating the environment of Batuu

cabin viewport, just as they would on any other ship window. As expected, the view on the starboard side is different from that on the port. The rooms are well appointed, with a television that can (remarkably) access programs from across the galaxy, a relatively large bathroom and an emergency exit in the event of a real unscripted emergency.

Tech tools

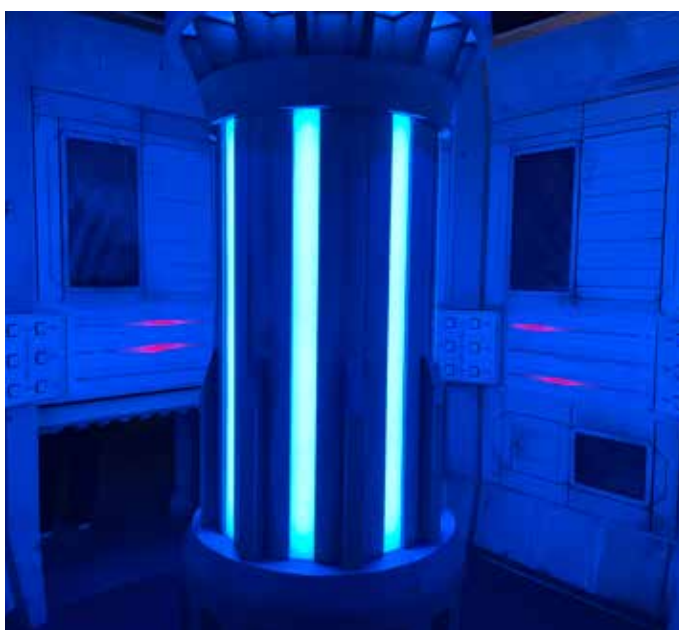
Galactic Starcruiser employs two main technologies that help bring guests into the story onboard the Halcyon. D3-O9 is a digital assistant droid that appears on a small screen in each private cabin. She responds to voice commands and prompts (think Alexa or Siri, only with more conversational skills and virtual chrome).

D3-O9 lives in the screen inside the guest cabin, providing information about the cruise, as well as being a source of historical data for guests to probe with their questions.

The other tool is the *Star Wars*: Datapad, part of the Play Disney Parks app available on each guest's smart device. The Datapad relays information about happenings on the ship, often covert operations that each guest can choose to participate in (or not).

The two digital elements are highly integrated with the other components of the experience, such that if a guest has a private conversation with the Captain, for example, shortly after that chat they may receive a message on their Datapad from the Captain inviting them to meet up with her later on, say in the ship's cargo bay, for a covert mission. Similarly, D3-O9 can play an informative role and reveal further elements of the story.

How does it all work? Disney Imagineers won't say, although they claim the system is largely autonomous, without a human "game master" controlling elements. Presumably this means information is compiled through location-based tracking and other technologies.



Inside one corner of the ship's engineering room



All guests have the opportunity to experience lightsaber training.

Guests concerned about privacy can opt out of D3-O9 and the Datapad, instead relying on a printed agenda, though doing so will cause them to miss out on much of the storytelling that takes place during the voyage.

It's worth noting that Disney has publicly announced that D3-O9 will only be available for a limited test period, perhaps indicating the technology system might be swapped out, upgraded or eliminated completely at some point in the future.

Communal touchpoints

The ship's welcome event is one of a handful of scheduled group interactions for passengers. Think of them as key touchpoints, or anchors, for the overall story. Everyone has the opportunity (though not obligation) to go through bridge training, lightsaber training, group dinners, a shore excursion to the planet Batuu during day two (a visit to the Galaxy's Edge land inside Disney's Hollywood Studios park), and a finale experience that satisfactorily wraps up all the storylines in the atrium at the end of the second night.

Beyond those core touch points, what happens during the rest of the cruise is up to each passenger. By engaging with crew onboard the ship and via the technologies mentioned, guests can be invited to embark on various adventures that take them to different corners of the ship to complete interactive missions that help take them deeper into the story.

For example, guests might be asked back to the ship's bridge area to help dock and hide a Resistance ally, sent to help fight against the First Order. Or they might be given a private tour of the ship's Engineering Room and then secretly called into service to help program the ship's systems to override any commands from the First Order.

Guests don't have to comply. They can defect to the First Order, they can be duplicitous, or they can decide in the moment whom they support.

Gaming elements

In crafting Galactic Starcruiser, one of Disney's main goals was to create an experience that blends fully immersive storytelling with gaming elements. The two scheduled training experiences every guest is invited to — bridge training and lightsaber training — both utilize simple (though very different) games to move the story forward.

Bridge training brings roughly 50 guests to the ship's controls to educate them on the various systems onboard the Halcyon, like docking drones, weapons systems, shield controls and more. Stations present individual puzzles and challenges to solve that impact the larger operation. Unsurprisingly, these skills come in handy later on when navigating asteroid fields or receiving special cargo. The games range from simple matching to more complex video game-like maneuvers with joysticks and dials, and according to Disney there are layers of difficulty, so more skilled players can still be challenged.

Lightsaber training provides instructions on how to use a lightsaber, utilizing a beam of light as target practice. Four guests at a time go through the training, with additional guests using shields to provide backup support. Each time the lightsaber or shield successfully blocks the beam of light, the device responds with vibration and lighting.

Aside from those two scheduled training experiences, guests who engage with the story will have the opportunity to take part in a variety of other experiences that serve both to advance the storyline but also provide additional gaming experiences. The Engineering Room operation, for example, puts pairs of two in a situation where they must simultaneously move large switches on a wall to match a lighted display panel.

One of the journey's major gaming components takes place during the scheduled shore excursion to Batuu. After boarding transport vehicles from the Halcyon, guests arrive at Batuu with their Datapads and, depending on what activities they participated



Fellow galactic starcruisers interact in the bridge with the ship's mechanic, Sammie.

in or characters they interacted with aboard the Halcyon, they are assigned a range of tasks and missions to complete while visiting Batuu. Datapads are constantly updated based on what the guest does or doesn't do while in the park, and their actions can result in activations within the land, even impacting their experience aboard the Millennium Falcon: Smugglers Run attraction. Furthermore, what they do on Batuu impacts opportunities presented to them back on the Halcyon later that day.

A talented cast

None of this would be nearly as engaging if it weren't for the very talented cast and crew of the Halcyon. Though it's easy to focus on the theming and technology, it's critical to understand just how important people power is to the success of Galactic Starcruiser.

Disney famously refers to all its employees as cast members, playing a role on the stage of the parks and resorts. But this truly takes the role of cast member to another level. The "front line" cast members who provide essential services onboard the ship, such as cleaning, serving, concierge and so on, perform all these services with the panache and courtesy they would were they stationed at the Contemporary or Polynesian Resorts. But they do it all in the additional service of the Halcyon's evolving narrative. They support the storyline as well as the primary characters on the cruise.

Those main actors are remarkable. In addition to playing out all the scripted elements, they must remember guests, ad lib with them and transit between different scenes with ease. While immersive theater actors such as those at *Sleep No More* perform for several hours over the course of an evening, Halcyon crewmembers keep it going for nearly 48 hours. It's no small feat and it's truly the entire crew of the Halcyon that makes the experience special.

Placing Halcyon in context

From an industry perspective, *Star Wars: Galactic Starcruiser* is a natural evolution of immersive themed experiences. In recent years, Universal and Disney have both excelled in developing themed lands that more fully incorporate a single IP into all aspects of the land. The Wizarding World of Harry Potter and Pandora – The World of Avatar led the way in creating story-driven experiences that are reflected in everything from food and merchandise to bathrooms.

Star Wars: Galaxy's Edge moved the needle even further, incorporating guest's handheld devices into the experience, providing different layers of interactivity for guests to uncover. Galactic Starcruiser builds on that and expands that interactivity to an impressive magnitude, taking what might have been a half-day experience and turning it into a fully enveloping world that, with only a moderate suspension of disbelief, can truly captivate and engage a guest for nearly two full days.

Importantly, all this takes place without the need to wear VR goggles or 3D glasses. While media elements are pervasive throughout the experience — after all, every window on the ship looks out onto a screen — they are fully integrated and it's nearly impossible to "see the edges." The technology that a guest directly uses is their own personal device. It's already a part of the lived experience, so it doesn't feel contrived or unnatural.

With *Star Wars: Galactic Starcruiser*, Disney has invested heavily in a hybrid built-and-digital environment, ostensibly nudging the themed entertainment trajectory more firmly away from virtual worlds and into ones inhabited by real people, with in-person gaming and face-to-face interactions. It's a bold move, but boldness is often required to advance new ideas and develop entertainment experiences that hopefully lead to broader, immersive (and intergalactic) horizons. • • •



Star Wars: Galactic Starcruiser allows guests to explore the galaxy as well as the Halcyon starship, including the Sublight Lounge.



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Technifex's Water Web creates a changing maze using curtains of water.
All photos courtesy of Technifex

Bring us your impossible ideas

Technifex remixes the formula to highlight solutions capabilities

by Gene Jeffers

“The pandemic was, ironically, a once in a lifetime opportunity. The entire world stopped,” says Technifex owner and CEO Monty Lunde. “We couldn’t waste the time since the pause gave us a chance to reinvent and improve what we do, how we do it, and why we do it. As challenging as it was, it has been two years well spent growing Technifex into a more efficient, more capable full-service enterprise. We are now better able to create and deliver exceptional immersive effects and technical solutions to multiple markets around the world.”

In early 2020, Lunde was just beginning to reorganize the firm following the retirement of longtime partner Rock Hall when the pandemic struck. “We were fortunate; we had an experienced and passionate staff,” Lunde notes. “Within a few weeks of the COVID onset, everything changed.”

Thanks to in-house reserves and government Covid relief programs, Technifex kept most of the staff on board. Within weeks, with new health protocols in place, their people were back in the shop completing remaining contracts. But what next?

“We asked ourselves, ‘What can we do during this time to make Technifex a better company? To make Technifex a better place to work, improve our efficiency and be ready when the world reopens?’” Lunde laughs and says the initial project was to remodel the lunchroom. “It sounds crazy, I know, but it was a start. And now we have a fantastic gathering place for the staff.” That first step opened the team up to other possibilities.

“We went on to ask ourselves, ‘What do we do best? Where and how do we deliver the most value for our clients?’” That answer came quickly, Lunde says. “Technifex has the passion, the expertise, the R&D and production facilities needed to create inspiring and impactful immersive environments and unique technical solutions for our clients.”

Known worldwide for their innovative products and systems — FauxFire®, FlowScreen®, Dragon’s Breath Heat Blaster to name a few — Technifex spent decades satisfying client demands for more realism, more flexibility, reliability and impact. Could they now take their offer to the next level? (Yes, they could.)



Monty Lunde
Owner and President



John Polk
Senior Vice President
Executive Producer



Joe Ortiz
Senior Vice President
Creative Technologies



Maurice Aboulache
Vice President
Engineering



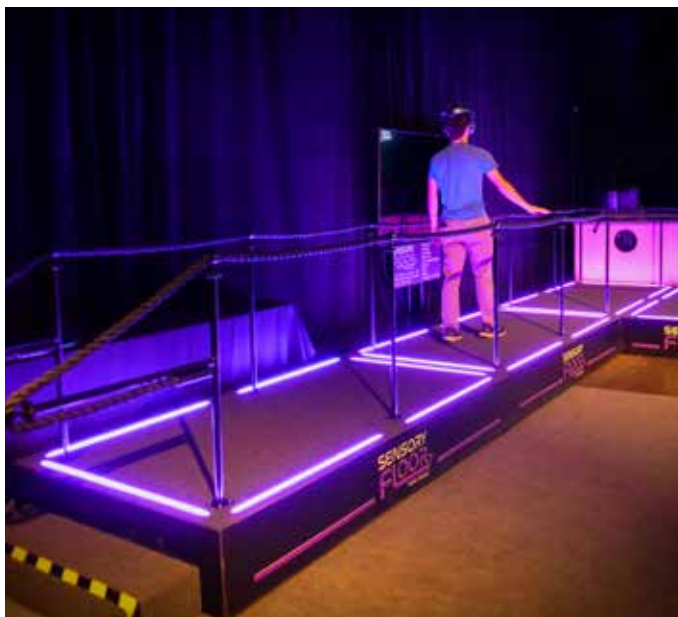
Gabriel Wilson
Senior Project Manager



Bill Clare
Project Manager

Improving Technifex's 42,000 square feet of facilities, its organization and equipment became the focus. Every aspect of the company was addressed with the objective of improving service by making research, development and production more capable and efficient. A far larger and more powerful water jet machine replaced an older one. Water-effects test equipment is now consolidated into a single-focus Aqua Lab with increased capabilities. The 20,000-gallon water effects test pool behind the building is augmented and reequipped. Steam effects test equipment is upgraded and integrated. Research and fabrication areas are reorganized for improved workflow. Two large and dedicated demonstration areas now showcase services and products. "Every square foot of our two buildings was re-examined and upgraded," says Lunde.

Technifex's existing products are now refined with an eye to quality, cost and deliverability. Derivative products and new applications are in production to meet future demands. 3D printing is being used to improve performance and dramatically lower production costs of their Variable Pattern Nozzle. A modular and scalable product, their Sensory Floor™, with built-in effects — wind, scent, leg ticklers, transducers, LEDs, pneumatic motion — is ready for delivery.



Technifex's Sensory Floor™ combines VR with tactical special effects.

Meanwhile, Technifex staff are realigned to better fit with client service and product development needs. John Polk, promoted to SVP, Executive Producer, now works directly with the firm's top themed entertainment clientele. Celebrating 28 years at Technifex, Joe Ortiz, as SVP of Creative Technologies, coordinates the team of in-house and external technologists. Stepping into Ortiz's past role, Maurice Aboulache as VP of Engineering oversees the in-house team of engineers developing advanced effects, show action equipment and control solutions for immersive environments. Other promotions include Gabriel Wilson to Senior Project Manager and Bill Clare to Project Manager. "All of these changes celebrate our people's strengths and are designed to ensure the best possible working relationships with our clients," says Lunde.

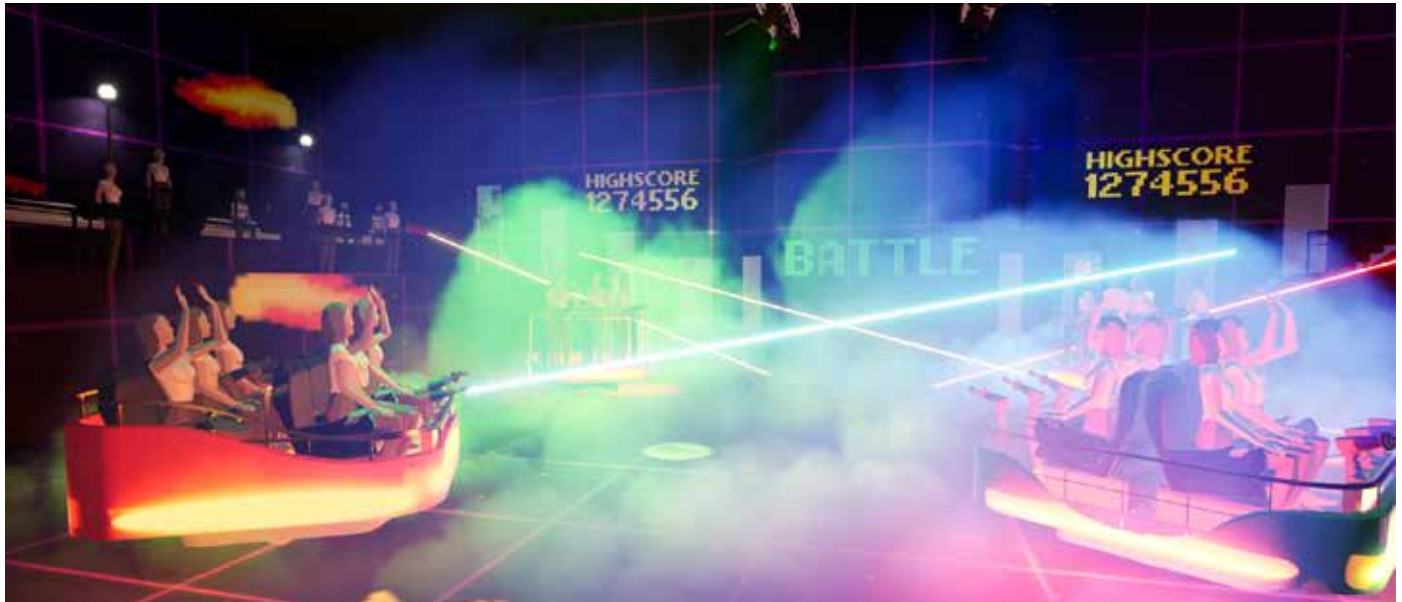
Joining Technifex and Technifex Products, a new company, Technifex XR, was formed during COVID and now provides solutions for first responder and military immersive training environments. Industry veteran Ian MacVittie runs that company as Executive Vice President.

Leading the industry for 38 years, Technifex once again has demonstrated its ability to adapt and evolve, powered by a dedicated team, entrepreneurial company culture and keen awareness of market conditions. "Bring us your impossible ideas," Lunde challenges clients, confident in this new Technifex. "We have an unmatched depth of experience, know-how, facilities and processes that allow us to create amazing solutions for our clients."

For more information, www.Technifex.com, email info@technifex.com or call +1 661-294-3800 • • •



Gene Jeffers, former TEA Executive Director (2001-2013), is currently serving as a Board member for the Greater San Gabriel Pomona Valley's American Red Cross and serves on the Board of the Historical Novel Society. He continues to write in a variety of genres. Based in Pasadena, Gene and his wife Carol (also a writer) are looking forward to traveling again and spending more post-COVID time with their two daughters, son-in-law and three grandchildren.



Concept of an interactive battle arena. Image courtesy of CAVU Designwerks.

Levels of engagement

What's new with interactive attraction design

interviews by Joe Kleiman

Interactivity and gamification are ever more integral to visitor attractions. At the new *Star Wars: Galactic Starcruiser* experience at Walt Disney World, elements of analog game playing, technology-based interactivity, live action role-play, and hospitality blend into one cohesive experience. Industry leaders Benoit Cornet, Founder & CEO of BoldMove Nation; Mark Stepanian, President of CAVU Designwerks; and Dina Benadon and Brent Young, respectively CEO and President of Super 78, spoke with InPark's Joe Kleiman about trends and technologies shaping the next generation of interactive attractions.

What have you learned from past experience that you're applying to attractions now?

Benoit Cornet: What I've learned from the past 20 years is that we have to be judicious in gauging people's interests and preferences when it comes to



Benoit Cornet
Founder & CEO
BoldMove Nation



Mark Stepanian
President
CAVU Designwerks



Dina Benadon
CEO
Super 78



Brent Young
President
Super 78

interactivity. Sometimes, we've put elements into gameplay that were overly complicated. As a result, people missed the fun in their experience.

Our work needs to be a humbling practice. Our sole agenda and reward should be that people enjoy a great experience. It can be exciting and immediately gratifying while also being smart and simple. Interactivity should be based on feedback and movement, with a superfast learning curve and easy to grasp, so people can focus on doing what they want to do right away. Walk in their shoes. Don't overthink it. If you give them a shooting device, they will shoot. For certain rides and attractions guests do not need an extensive explanation or tutorial but want to just dive right into it and enjoy the experience.

Mark Stepanian: Nine out of every 10 requests we get for new attractions reflects the desire for more interactivity. With "Battle for Eire" at Busch Gardens Williamsburg, we used basic eye tracking and head tracking with the VR headsets. "Twilight Saga: Midnight

Ride” at Lionsgate Entertainment World in Zhuhai, China, was the next step of interactive experience design for CAVU. It combines scent, force feedback, and several other sensory devices to provide an increased level of interaction that is experienced in real-time. One of the new attractions we’re currently working on takes “Midnight Ride” to the next level, further deepening interaction and sensory engagement.

Noting that people have become more reluctant to use VR gear that others have put on their faces, we introduced our Quest product line in the midst of the pandemic. Quest provides a similar, wholly immersive experience to VR without users needing to wear a headset. In an early version, handheld devices with embedded sensors were used to track guests. Projectors would illuminate the area where the tracker was pointing. Now, we’re able to use a combination of body tracking and eye tracking to trigger projection mapping and special effects without the need for physical devices. By using guests’ natural actions, we can trigger experiential responses organically. In that way, the experience is much closer to how we interact with our world in real life.

Brent Young: We’ve learned a lot and have a ton of fun with our Geppetto digital software. As technology improves and awareness builds for this Super 78 proprietary interactive digital characters system, we are able to leverage the software and hardware and continue to upgrade and improve to meet adjacent experience markets. We’re now developing a touring live show for the LOL Surprise doll line that brings the dolls to life. And we’re working on an interactive character for the new Mattel theme park coming to Glendale, Arizona.

During the pandemic, a lot of out-of-home entertainment migrated to in-home and in-theater environments, and we used

Geppetto for a preshow involving an animated elf for kids waiting for a virtual Santa. This allowed U.S. servicepeople who couldn’t be with their kids during the pandemic to participate in the activity with them.

What impact will Disney’s recently launched Galactic Starcruiser have on the industry?

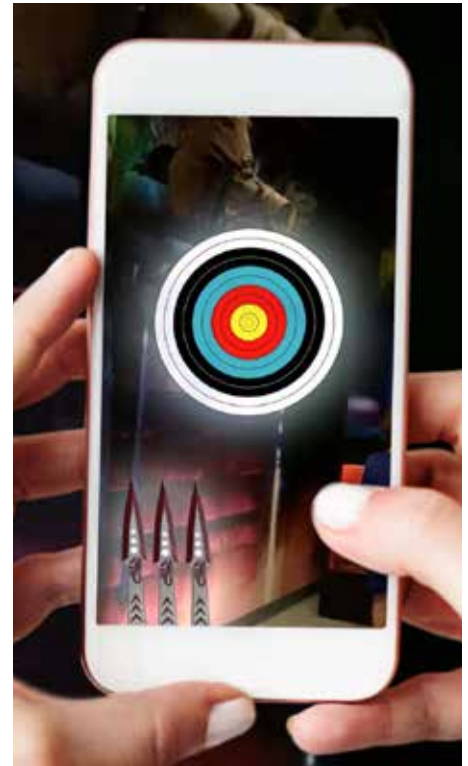
Cornet: The cold truth is that in most cases, nothing beats live experiences, and live actors often turn out better than animatronics. I am a firm believer in the use of AI [artificial intelligence] but unless your budgets and access to technology are unlimited, a live encounter is the best option for an emotional connection.

Galactic Starcruiser shows what you can do — and how much you can ask of guests — when you’re working with a really strong IP, in this case, *Star Wars*. Guests are ready to go the extra mile; being familiar with the IP and its culture, they bring a good understanding of what is requested from them. Not all IPs are equally powerful and therefore you may need to scale back your ambitions and depend on your live cast. A great example is Knott’s Berry Farm’s Ghost Town Alive, where actors can correct guests on the spot if things are heading in the wrong direction.

Stepanian: Galactic Starcruiser is the first of the next generation of immersive experiences. When developing projects, the first question is always about the general population’s willingness to participate in the story. For more mainstream attractions, such as theme parks, how do you give the guests agency without giving them too much agency, so that different types of guests can enjoy different experiences? We try to balance an active experience while still delivering the core narrative. For example, Midnight Ride has path variability, but a rider who wants to sit there and



RiseNY - A Soaring Journey Through New York. Image courtesy of Super 78.



Left: Smash & Reload interactive dark ride **Right:** Augmented Reality Minigame
Images courtesy of BoldMove Nation

not steer the motorbike will still experience the main story. We're always trying to determine when to put the attraction on autopilot and when to make guests part of the experience.

Young: We're all captivated by Galactic Starcruiser. We're all watching it as a pioneering example of a high-capacity, interactive hotel experience. We have to keep in mind that it's too early to tell with this project. It's challenging conventional hospitality models, but it's also pushing the ticket price to the stratosphere. Already there has been some serious reaction cost. We need to wait and see. The Van Gogh experiences are a price point that makes it easier for guests to feel that they got some value for what they paid, while also being game-changers of interactive multimedia immersive projection. Black box ideas can bring in media, new shows and new formats to display those shows. If they catch on and things are standardized around a format, people will develop new and exciting things around them.

How does technology factor into interactivity?

Cornet: We did the utmost to keep our Smash and Reload attraction, which is now in production, as plain and simple as possible. With every step, we think how to make the fun as immediate as possible. This is an exciting exercise in "less is more." Our goal is storytelling with a strong emphasis on humor, action, experience and sound. The audio part is a strong element in our partnership with Triotech: they work hard to deliver superior sound and movement, with each vehicle being a genuine auditorium with no less than 16 loudspeakers.

The mixing of two different actions — smashing and reloading — is designed to balance the strengths of the players and make it a more enjoyable experience for everyone. We keep the story basic. Exhilarating action, characters that you enjoy targeting, an environment of music and sound, and a great ride dynamic; this is a simple, efficient recipe for entertaining a broad audience. This approach helps keep

the attraction compact, simple to operate and within budget. This is the result of experience acquired in producing many dark rides — going back to the very essence of dark rides and what people like them for.

The same philosophy applies to our AR [augmented reality] Hybrid Quest product. Again, we have started with what people like and actions that are familiar, eliminating any complexity that is a barrier to immediate enjoyment. With AR Hybrid Quest, people use their phones. The park infrastructure requirement is minimal; yet it adds an extra dimension to the park environment. We can help integrate the attraction within a bigger story and additional elements. People go to the parks for the live experiences; AR should add value but not replace them.

Stepanian: When approaching any storytelling experience or attraction, we ask, "What are the emotions we want guests to feel and how do we achieve those emotions in the best possible way?" Sometimes those emotions can be best conveyed with a flying theater, sometimes a custom-designed motorbike



RiseNY screen projection. Image courtesy of Super 78.

motion platform, and sometimes a live performer. We never want to put new technology into an experience just because it's new technology. Technology must be used to help deliver that emotional response. The magic of any experience comes to life when you don't even realize the technology is there. For instance, our eye-tracking room amazes guests because it allows guests to drive the experience organically without any physical or visual technology. When the tech fades away, the emotions become the center of the experience.

Young: In our flying theaters, we've had smells, temperature changes, water sprays — that sort of thing. Now that we've established the baseline, we can build on top of what was already there. Smells are now expected — so what is the next engagement of the senses? We must have it — it can't be an option. In our new flying ride in New York City, we've added strobe lights into the canopy that flash in accompaniment to fireworks on the screen. We're bringing the action closer to the guests.

At one time, I would have said physical elements are not important. Now integrating real props with media is the magic. The trick is to make it feel more real. These blended realities become more and more important as people are now used to just looking at screens. Movies have become an everyday event.

Dina Benadon: One way we're bringing magic back to the movies is through Magic Screen — creating interactive ways for consumers to be a part of the movie experience, to be immersed. We're taking proven theme park technology, building an

interactive network to theaters around the country and bringing that theme park level interactive experience to local theaters. Imagine being able to interact with your favorite movie and that special animated character, live, before the movie starts.

Do interactive attractions need a storyline to be successful?

Cornet: Our role is to make sure the guests have fun and in the most direct way possible. Surprise is good, but meeting expectations is paramount. We help our clients offer a competitive experience — not everyone can mount a gigantic effort around a mammoth IP, but there is a “no nonsense” approach to making magic with a lesser-known IP. Being active in Europe means we deal with many different cultures and languages: In this area, we have to carefully weigh verbal and non-verbal aspects, and keep in mind the impact language itself can have. Keep the storytelling as smart as possible; support the visitors in creating and living their own stories.

Stepanian: We have a new experience called Battle Arena, which is based around our Self-Driving Vehicles (SDVs). We designed this because certain experiences don't demand a deep story. The digital assets needed for stories can take years and significant investment to develop. In Battle Arena, guests on the SDVs have a variety of different tools to use, and they can interact with others in the same arena. Each person has a different set of tools and goals for the battle and those drive the experience instead of a story.

Young: One project we're working on involves creating immersive, interactive dining experiences, highly customized for individual guests. They receive info about the food they're eating and the wine they're drinking in a Holodeck-style, interactive environment. Cooking and food are arts that engage all the senses.

We looked at how much interactivity guests want in high-end dining, how much eye candy. It has to be very intuitive and very simple, something recognizable you can engage with. The dining experience is part theme park, part museum, and part restaurant — there are already a lot of mashups in the industry. The human element is very important. The curator will be knowledgeable, but also perform a bit of theater.

Benadon: The immersive dining experience adds another whole level to the senses. It's an example of how we are developing new ways to touch guests' emotions through storytelling. I call it "immersive fusion." This is really what Web 3.0 — the Metaverse — is truly all about. That should be the next opportunity — the blending of the physical world and the metaverse; adding this digital component — essentially a digital experience — that guests can share.

Are there any exciting trends you're following?

Cornet: I am totally into all the progress of AI and the ability that it will give to create what we call "contemplative interactivity," where the content and the attraction are revolving around the visitors, anticipating their reactions (or absence of) and making the experience different every time. If you think of it, it comes down to bringing attractions alive, yet in a way that will be affordable for most park owners. It can be challenging for the smaller players to come to market with competitive visitor experiences, but that's where our creativity comes in.

Young: The next level of engagement is with digital online — renamed and repackaged for attractions and experiences. We're going to be depending more on AI soon, but we're not quite there yet. The real game changer will be real-time speech conversion, where a live actor speaks, but the voice heard on the other end is the character's; this kind of AI transformation is very close. Think about the bot technology we interact with now frequently on the phone, that's tech we're looking to deploy. As long as latency and realism don't go wrong, it's 99.9% bulletproof.

Benadon: The deepening level of digital and online engagement has prompted us to reach out to form partnerships with companies like Microsoft, Unity and Nvidia who are leading the way with these types of technologies.

Stepanian: Recent openings have included attractions that offer substantially longer experiences from the more traditional dark ride experience. Feature-length attractions are a new genre and we're starting to see more interest in them. Where we used to put our sole focus on the attraction portion of the experience, we can now create a whole cohesive experience from approach to queue to preshow, then the main attraction, and finally the postshow. Experiences are drifting away from being just about the ride and are now bringing in many different areas including connected or integrated retail, thematic food and beverage offerings and the ability to build upon the experience after you have left the physical attraction space. At CAVU we are starting to explore integrating sensors into merchandise that can enhance the on-ride experience. We're also developing companion apps that enhance the on-ride experience while also allowing our guests to continue the experience at home. We think these exciting trends of viewing the attraction as a more holistic experience will continue to evolve. • • •



Concept of an interactive battle arena *Image courtesy of CAVU Designwerks*

Technology that Drives Outstanding Experiences.

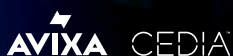
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Media systems revolution

disguise: a server platform that supports an end-to-end workflow

by David Paul Green

In themed entertainment, the need for media systems that can handle massive amounts of data, as well as manage the design and development process from start to finish, has grown. In response, London-based global company disguise created a fully integrated hardware and software platform that unifies the tool set, allowing the same system to be used from concept design through to implementation, or as disguise refers to it, “end-to-end.”



Peter Kirkup,
Solutions Director, disguise

“It’s a pretty exciting space,” says Peter Kirkup, Solutions Director at disguise. We’ve got this 3D-accurate pixel simulation that we do within the software that’s really a critical part of the process. We’re not just about the control of the final output pixels to the projectors or LED screens — or whatever we’re connecting to — but also about the entire supporting workflow.”

He continues, “The cool thing about disguise is that the work that our clients put in to win the job is actually the technical setup of the project. They are front-loading the technical setup, so that when it comes to the delivery phase, 80% of the job is already done. They do not have to deal with setting up the system because that was already done months before when they were pitching and previsualizing and starting to validate content. Our software’s capability to pre-visualize and plan a project to perfection is why many of our clients choose to use disguise.”

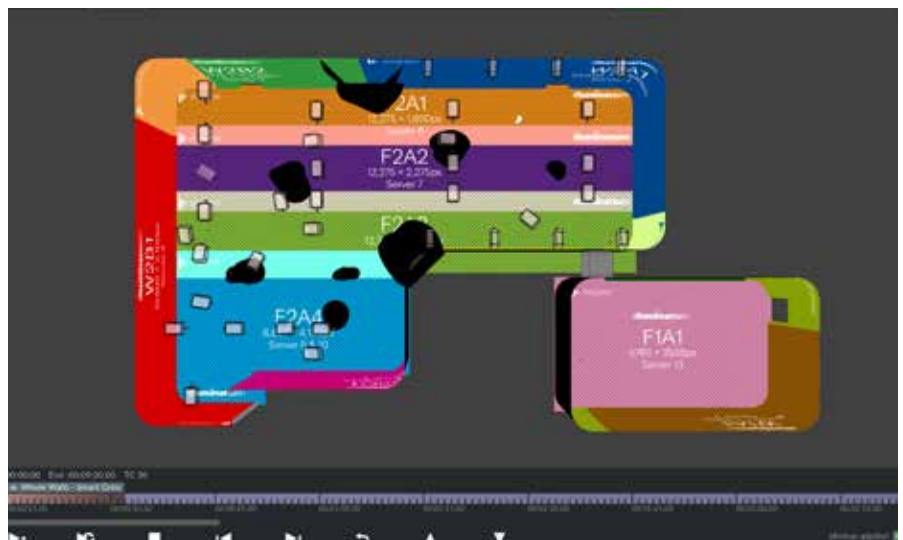
It is this incorporation of the concept design tools into the development and implementation framework, along with its Apple-like total integration of hardware and software, that makes disguise’s platform so groundbreaking. Instead of each discipline within a project having its own set of tools, the disguise platform allows all the disciplines to work on the same data (design info), streamlining the project, and keeping the overall project vision from being lost in the process or going off the rails.

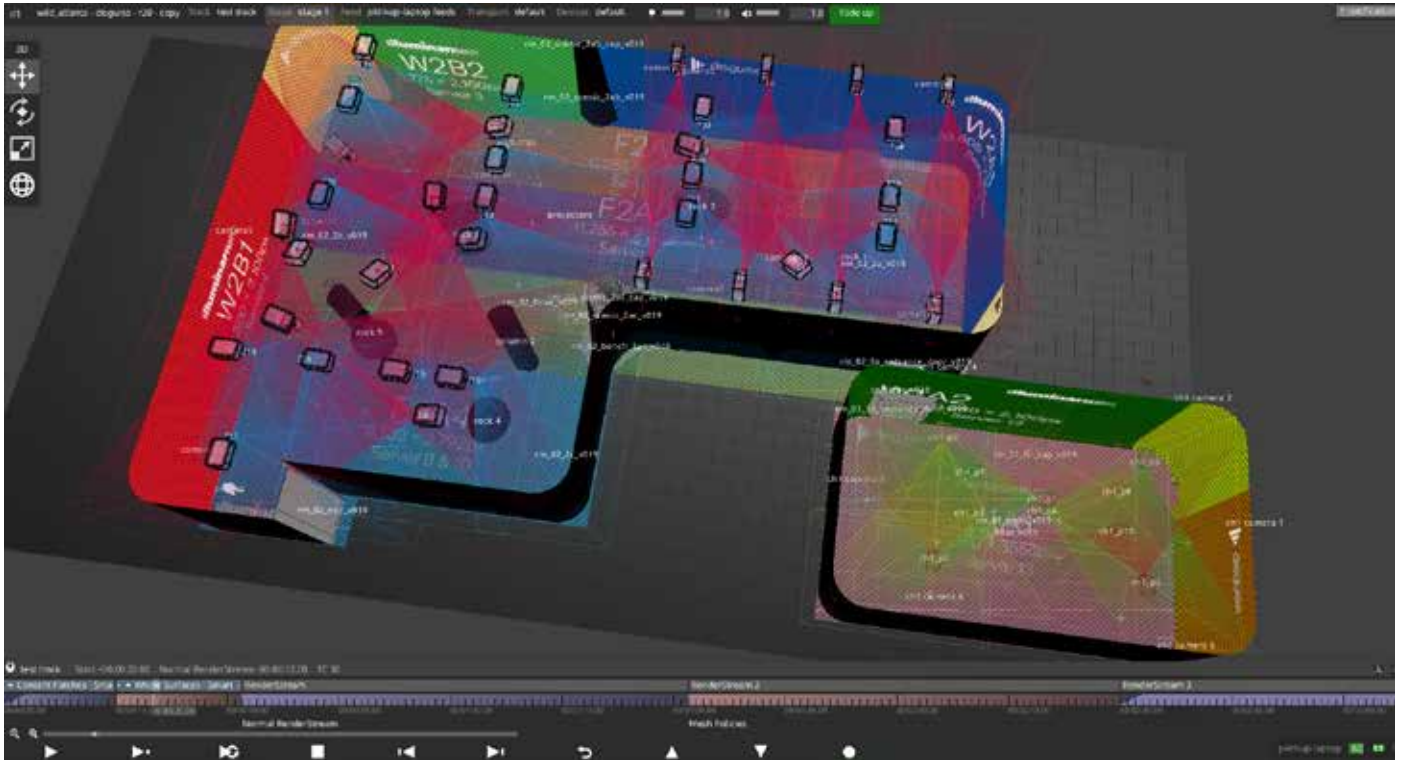
“The vision of disguise, with this end-to-end 3D pre-visualization through to delivery workflow, is that everyone should be able to work in our tool,” says Kirkup. “The designers

can use it for pitching, for pre-vis, for working on concepts. The technicians can focus on pixel pitches and resolutions and lens selection, brightness, luminosity and more. Everything converges in that one tool. The data is being built up in the same project. As we get through to deployment, you can easily give key stakeholders visibility on the project. In particular, he noted, the system can be used to provide a 3D showcase of the project and get client sign-off on the design. “This is an enabling technology that allows you to sell as well as to deliver,” says Kirkup.

An example of this in practice is the new immersive walk-through experience, Illuminarium, which opened its flagship location in Atlanta, Georgia, in July 2021. Illuminarium currently features “WILD,” a projection-mapped African safari show, shot on multi-camera arrays. “There are 46 4K projectors running,” Kirkup says. “You have a full 360-degree surrounding periphery of content on the walls, and additional interactive content on the floor. It’s very, very rich in immersive content. They’re using 18 of our vx 4 servers to play out the video on all of those projectors and leveraging the OmniCal projection alignment tool to do all of the automated lineups of the projectors. We are definitely seeing a trend of systems getting larger and people getting more and more confident about the use of AV technology really as a seminal part of the experience.”

Modular scalable architecture underpins the development of disguise hardware and software so that, as the production grows and the scalability and the complexity get larger, its users can add more components as desired.





Above and opposite: disguise software is built for scalability and complexity. *All images courtesy of disguise*

Despite the inherent complexity of such systems, disguise created its Designer software to create a seamless process. “The primary focus is what we call the stage,” Kirkup says, “which is our 3D render. Ninety percent of the time, what you are looking at is a 3D simulation of your event in front of you. That’s what you’re looking at when you’re compositing in our timeline, and adding layers in, and playing around and manipulating; you can see the impact live on a 3D model that shows you what that’s going to look like out on the real system. Then there are various other pop-up windows and things that you can bring up to deliver more specific jobs.”

With such trailblazing technology, disguise places an emphasis on product education. Kirkup says, “During COVID, we made a conscious decision to invest in and ramp up our training resources because our community, from the live event space especially, was suddenly left with fewer work opportunities. We

launched an e-learning platform where all our training is available online in module form for free. We ran a lot of free webinars, created free training materials, and we even gave our Designer software away for free and continue to do so. This strategy was all about opening up the ecosystem and enabling people to design their own shows and build their own experiences with the right tools at their fingertips.”

“This is really about new capabilities for AV,” Kirkup concludes. “It’s not about us coming in as a competitor to existing stuff. We’re trying to do things differently. We’re trying to allow people to create what was previously thought of as the impossible!” •••

For more info, see the disguise webinar “How to Create Infinitely Scalable Content” at <https://www2.disguise.one/disguise.webinar>



A closer look at the 3D simulated environment



David Paul Green is COO and President of lighting firm Visual Terrain, Inc. He has over 35 years of experience in managing and delivering large and small development projects, including user experience design, creative and technical writing, theme parks, film, website producing, television and animation support, software development, information architecture, project management, public relations and photography.

David holds nine U.S. patents for user interface design and is a frequent contributor to InPark.

The “invisible” projector

Barco offers flexible solutions for media-based attractions

by Joe Kleiman

Projection systems that seamlessly integrate with the audiovisual workflow support designers, integrators and operators striving to present the best visuals and latest media in their attractions. Barco’s new projectors are designed to create versatility in their deployment and deliver ultimate flexibility for media-based attractions. As a tool for the storyteller, these projectors are designed to be “invisible” (essentially undetectable or unobtrusive to the guest; compatible and adaptable for the creative and technical team) while providing optimal imagery for a wide range of applications, spaces and settings. The recently announced XDM and XDX projectors, based on Barco’s cinema projector series, are native 4K and are designed for environments such as dark rides and theatrical shows, while the UDX, UDM, F- and G-series projectors are well suited to projection-mapped projects.

Multiple Thea Awards for Barco projects

Several projects using Barco projectors have been honored with the prestigious Thea Award from the Themed Entertainment Association four years in a row. The art exhibition *Carrières des Lumières* received a Thea Award in 2018. Three dark ride

projects also earned Theas. Barco partnered with Alterface on two of these projects — Bazyłiszek at Poland’s Park Legendia (awarded in 2019) and Popcorn Revenge at Walibi Belgium (2020). The third was Sesame Street: Street Mission at PortAventura World, produced by Sally Dark Rides (2021).

Both Bazyłiszek and Popcorn Revenge utilized the PGWU-62L laser phosphor projector. One of the benefits of this projector for use in a confined space (such as a dark ride tunnel) is its very low noise levels.

The versatility of Barco’s UDX-W22 projectors is demonstrated in how they illuminate each of the Sesame Street ride’s eight screens. The screens range from 30-feet to 70-feet wide. Four of the screens feature projection mapping on dimensional sets with practical target integration. Another screen is curved 90-degrees, with animatronic and show element syncing. Two more screens are curved 180-degrees, allowing for a flight through The Count’s castle and a dive into Oscar the Grouch’s trash can. The final screen is flat and is used as a Hall of Fame scoreboard.



Carrières des Lumières Photo courtesy of Culturespaces



Koen Van Belle



The new XDM and XDX projector models

Operator-friendly design

Barco recently introduced a new projector line designed specifically for the attractions market. According to Koen Van Belle, Segment Marketing Manager overseeing the themed entertainment market at Barco: “We had received requests to show high resolution images with a very large color palette. Our new XDM and XDX meet these needs by using discrete RGB lasers as a light source to show a Rec. 2020 color gamut. Both XDM and XDX projectors are using native 4K durable DLP chips and are providing a brightness of 25K and 40K lumens.”

The XDM and XDX have a modular design to support the replacement of individual components if issues arise. The modules are designed to be removed and replaced from the outside of the projector. This internal setup of the modules facilitates servicing the projector on-site. “Barco provides training,” says Van Belle, “to make sure the projectors are serviced and maintained in the best possible way, so visitors can

enjoy the attraction over and over again. We are confident in the reliability of the new XDM and XDX line as they build upon Barco’s existing cinema projector line.”

Two additional advantages that the XDM and XDX share are 1) cloud connectivity — which allows projector placement in non-traditional locations while allowing management and technical staff to operate and remotely monitor them, an advantage for both operations and projector maintenance, and 2) installation flexibility with different lenses from ultra-short throw projection to long-distance projection.

Like the XDM and XDX, the UDM and UDX also feature modular components and cloud connectivity. Regardless of the project, Barco provides flexibility by concentrating on the projection aspect while the client can utilize their own servers, 3D software and other equipment.



Sesame Street: Street Mission at PortAventura World, produced by Sally Dark Rides
Photos courtesy of Barco, unless otherwise noted



Legandia's interactive dark ride Bazyliżek

Museums and outdoors: Projection mapping

Within the museum sector, Barco technology can be found in fulldome theaters and is incorporated into IMAX's laser projection system. For indoor projects involving projection mapping, Barco offers the G62, G100 and F80-series projectors. "These laser phosphor projectors are offered in a range of lumens, starting at 7,000 lumens, tailored for indoor mapping," says Van Belle. "Barco is best known for its larger projectors, but we have also developed smaller projectors ideal for museum installations."

In a series of installations, Barco partnered with the French cultural organization Culturespaces on Carrières des Lumières museum in Les Baux-de-Provence, Bassins des Lumières in Bordeaux and Atelier des Lumières in Paris, an agreement that has since been extended to other projects. 2018 Thea Award recipient Carrières des Lumières, built inside an ancient quarry, features giant, animated projected images along its walls based on classical art.

"Projection mapping tends to differ from market to market," says Filip Vindevogel, Segment Marketing Communication Manager for Entertainment at Barco. "In North America, there is much demand for indoor applications for museums and attractions. In Europe and other regions, it's both indoors and outdoors due to the emphasis on cultural heritage."

For outdoor projection mapping, Barco's UDX and UDM series are both designed to be installed in climate-controlled, weather resistant housing. "The high light output — 41K lumen for the UDX and 22K lumen for the UDM — gives the necessary

brightness to project on large structures, and the wide variety of lenses gives the flexibility to install them in all locations," says Van Belle. "Next to the WUXGA and 4KUHD resolution versions, we also offer an UXGA version with a 4:3 aspect ratio, which is ideal for outdoor projection mapping since it mimics the shape of most buildings."

In a recent project in China, UDX projectors are used in the city of Zhangjiakou to projection-map a nighttime spectacle onto the cooling towers of a retired coal-burning power plant. In Lhasa, Tibet, one of the highest elevations ever for a projection mapping event, the UDX proved itself in projecting on the plaza in front of the ancient Buddhist temple 12,000 feet above sea level.

"We are always aiming for the best quality," says Van Belle. "Our goal is to show the content as intended without loss of pixels or information. We're not just supplying the projectors, we're a partner in the whole system." (And a somewhat "silent partner" at that.) "We work to keep our projectors out of the way so they can't be seen," Van Belle adds. "Our tech should be integral, but it should also be invisible for the visitors to provide for the best immersive experience." • • •

Visit <https://www.barco.com/en/products/projection>



The Crayola Experience at the Florida Mall, Orlando. All images courtesy Crayola.

Drawing on experience

Crayola Experience available for global licensing opportunities

by Judith Rubin and Wendy Grant

Crayola is now seeking partners around the world to license and develop new iterations of Crayola Experience, a scalable, customizable type of branded family entertainment center (FEC) that is uniquely and recognizably Crayola.

Crayola rolled out the first Crayola Experience in 2013 at its headquarters in Easton, Pennsylvania. This reflected a new direction for the company: Crayola, re-envisioned as a creativity brand and IP (no longer just a crayon manufacturer) and bringing immersive attractions to families through location-based entertainment (LBE) development and other opportunities. Four more Crayola Experiences followed in Orlando (2015); Minneapolis (Mall of America, 2016); Plano, Texas (2018); and Chandler, Arizona (2019).

Suitable for multiple types of venues and installations, Crayola Experience is primarily targeted to families with children ages 12 and younger. Visitors spend an average of three hours engaged in specialized, creative activities. Each Crayola Experience integrates retail and other opportunities for ancillary revenue and generates a high rate of repeat visitation. The product offering and business approach are constantly being refined to maintain a sustainable set of guest experiences that are immersive, educational and fun for the entire family.

Trust and success

Armed with nearly a decade of learnings, Crayola is ready to share its proven success through licensing, creative collaboration and partnerships. The company mounted a substantial presence at the 2021 IAAPA Expo, the largest leading global forum for the attractions industry — and will be present in force at the 2022 Licensing Expo (May 24-26 in Las Vegas).



Crayola Experience Orlando



Victoria Lozano
Executive Vice
President Digital
Strategy, GM
Attractions & Retail
Crayola



Dan Aylward
Director of Operations
Crayola



Warren Schorr
Vice President of
Business Development
and Global Licensing
Crayola



George Wade
Project Director
Bay Laurel Advisors

At the foundation of Crayola's LBE ventures are a brand known and trusted around the world, and the universal value placed on child development and creativity. Within each Crayola Experience attraction, those essentials play out in a series of unique, engaging activities that incorporate proprietary Crayola products and can be developed for spaces from 20,000 to 50,000 square feet. A retail store, food and beverage venues, and the potential for pay-to-play games are revenue-generating possibilities beyond the gate. Because the experience is highly repeatable, annual pass sales are another strong revenue generator, equaling roughly one-third of the usual annual attendance. Once established, the attraction also is a wonderful venue for private events, from group sleepovers for kids to corporate teambuilding.

The team

Key members of Crayola's internal team focused on LBE expansion are Victoria Lozano (Executive Vice President Digital Strategy, GM Attractions & Retail for Crayola), Dan Aylward (Director of Operations for Crayola), and Warren Schorr (Vice President of Business Development & Global Licensing for Crayola), as well as consultant George Wade of Bay Laurel Advisors, who has served as Project Director for the five current locations.

This is a seasoned and dedicated team. Lozano's rich background in marketing and general management with Fortune 500 CPG companies and 12 years with Crayola complement Aylward's decades of experience in theme parks including stints with Kings Island, Six Flags, Magic Springs, Kentucky Kingdom and a variety of international projects — as well as four years' service on the IAAPA Board of Directors. Schorr's experience in licensing includes work with Warner Bros., 20th Century Fox and MGM, which is where he first met Wade, a specialist in the development of strategic and creative LBE strategies for brands with over 30 years in attraction development.

Unique to the FEC space

FECs are a growing market sector around the world and are increasingly popular in cultures that emphasize family interaction across generations. That multi-generational appeal is what Crayola Experience is designed to accommodate and encourage, and what makes it compatible with other family leisure locations — including shopping malls, tourism districts, and theme parks. "What differentiates Crayola Experience is its focus on creative play and creative engagement, based on Crayola's mission," said Schorr.

That creative identity and mission permeate Crayola's internal culture. "Across the entire company, we have a clear understanding and alignment of Crayola's purpose," said Lozano, who left Cadbury to join Crayola in 2009 as VP of Marketing. "Everything we do is grounded in our mission to help parents and educators raise creatively alive kids. No matter what their role is in the company, everyone knows that they support that purpose."

That creativity also shapes every part of the Crayola Experience facilities. Designed to exude Crayola, even the familiar smell of the crayons drifts in the air. And everything guests see is wrapped in the brand's iconography. Oversized Crayola products form much of the décor — giant markers are peppered across the floor, columns are converted to crayons and the tables appear to be made of melted wax. The theming continues in the design of the interactives, like "Wrap It Up!" which is housed inside large stacks of sculpted crayon label reels, similar to those seen in the real factory. All the while, a soundtrack composed specifically for the space plays in the background. With all the senses engaged, the result is a truly immersive brand experience.

The impressive dwell time and return visitation are a function of the nature of the experience. The dozens of hands-on activities are designed to engage the entire family every time they visit. While exploring this colorful world, kids and adults alike tap into their imaginations and — through tactile, digital and physical interactive play — can express their individual creativity. "These experiences are fundamentally unique and personal for each guest every time they visit," Lozano said.

Opportunities to collaborate

Schorr notes that Crayola is uniquely positioned to work with a variety of potential partners. "There's nothing else like Crayola Experience," he said, "and we want great collaborative partners who want to be part of that. We have a brand that adults trust and kids love. We bring a proven business model and a tested concept. Our world-class, experienced team is here to support partners from planning to launch — and every day after that."

Lozano agrees. "Just as operators today may add a waterpark, aquarium, FEC or retail zone to the mix, they could add a Crayola Experience as the second or third gate of an integrated resort."

Every Crayola Experience will reflect the popular Crayola brand and uphold



Crayola IDEAworks at The Franklin Institute

its design standards while being customized for the specific space and location. Licensees will work with Crayola to select the best components for their space, armed with input on what has already proven successful at the current five locations. The number of activities can vary based on the facility's square footage. For example, the Orlando Crayola Experience offers 26 activities, while the smaller Chandler location offers 17. Many of the activities are scalable. For instance, some of the current Crayola Experience locations have 12 "Drip Art" interactive stations, where visitors create spin art using melted Crayola wax, while other locations have six such stations. While technology is inherent in many of the activities, creativity is the key. The visitors immerse themselves in play, expression and design.

Schorr also noted that Crayola Experience stands out because all the attractions are unique to Crayola, incorporating patented designs, engineering and scripting. All aspects of the visitor experience have been carefully designed, developed, tested and — when needed — refreshed.

According to Aylward, two iconic interactives popular with visitors across multiple locations are "Wrap It Up!" where visitors personalize their own unique, authentic Crayola crayons, and "Melt & Mold," where visitors make a ring, character or animal from melted crayon wax. A more recent offering that kids love turned Crayola's award-winning Scribble Scrubbies toy, released in 2019, into a life-size attraction. Here, visitors can draw on and color a Scribble Scrubbie, wash it clean, and then start again to design a new creation. Aylward pointed out, "That's a great example of the advantage of partnering with Crayola. We have a vast product line that we're able to creatively incorporate into Crayola Experience to provide a new offering that's instantly

recognizable and appealing to visitors, and that enables operators to have something new to bring customers back."

Crayola is also interested in working with partners to create localized features that will help differentiate their venues. Schorr pointed out that the Easton Crayola Experience is the only location to offer "Water Works," an 85-foot water table with working locks and dams. "Water Works" is reflective of Easton's history and its location at the confluence of the Delaware and Lehigh Rivers. "That's the type of offering that provides something unique and meaningful to the local audience and can give the venue standing as a destination attraction," said Schorr.

Creatively engaging across generations

Crayola's own internal team of education specialists helped to incorporate key aspects of child development into the Crayola Experience activities. "All of the activities in Crayola Experience are very hands-on and tactile," explained Lozano. "We are purposeful in how we incorporate a variety of experiences to appeal to all guests — from art-making to climbing and physical movement, to digital and technical interactions." This diversity strengthens the attraction's multi-generational appeal.

Crayola Experience isn't designed for kids alone; guests of every age receive a ticket, attraction bag and tools to express their creativity. Crayola supplies that are distributed in the attractions, such as the popular Scribble Scrubbies, are given equally to kids and adults.

Noting the positive emotions associated with childhood that Crayola evokes, Aylward said that parents tend to start off with a little detachment, enjoying their children's activities, but end

up being drawn into the activities themselves. “Quite often Dad is still there, finishing his picture, while his child has moved on to another activity nearby.” School groups are a key market subset for Crayola Experience. Most of the attractions naturally incorporate STEAM (Science, Technology, Engineering, Art and Math) in an educational and entertaining way. Current Crayola Experience locations offer free memberships for educators, lesson plans and an on-site class, such as an opportunity to learn the science behind how a perfect Crayola crayon is made, to enhance field trips.

Lozano said, “It all stems from Crayola’s mission and core belief that creativity matters.”

Long-term support

In the U.S., the Crayola Experience team has sought to establish itself in markets with a large presence of children and young families. A strong tourist market is a plus, but more importantly, the experience is tailored to the location. In Easton, Crayola Experience is a tourist draw in itself. In Orlando, a city full of tourist attractions, Crayola Experience has been successful primarily as a regional, resident-oriented attraction and secondarily as a tourist destination.

In malls, a Crayola Experience functions as an anchor, bringing in the desired demographic and with the potential to significantly expand the property’s appeal and serve as a major family draw (pun intended). Said Aylward, “A typical mall expects to draw its visitors from a range of 10 to 15 miles, but Crayola Experience attracts visitors from as far away as 100 miles.”

Part of the appeal to multi-generational family groups is that it offers a safe space for everyone to gather and play creatively, as well as a break from everyday routine. Lozano pointed out, “There’s no buying supplies, no setting up a space, and no clean-up. Crayola Experience provides a getaway for the whole family that’s fun and easy and creates lasting memories.”

No matter where the next Crayola Experience opens, the team is ready to support it from concept to completion and beyond, including marketing and ongoing operations. Aylward said, “Because we have owned and operated Crayola Experience for years, we have so much to offer our partners, from design elements to construction support to standard operating procedures to graphics packages. We’re able to adapt to the unique needs of a partner, location, culture and market.”

Crayola intends to continue to develop new attractions and plans to offer a new activity to Crayola Experience partners every 12 to 18 months. “We’ll always have core experiences, and what our visitors create from those experiences is never the same from one time to the next. But we also want to continually introduce new experiences, to ensure that things feel fresh and families have a reason to return again and again,” said Lozano.

Crayola also recently began partnering with brands and IP owners to introduce new experiences and events to Crayola

Experience audiences. The recently launched collaboration tour with OceanX, a global ocean exploration nonprofit, asks visitors to complete activities such as sculpting their own ocean creatures and learning about the layers of the ocean, before finally coming face-to-face with a “Giant Squid.” The “OceanX Adventure” traveled to Crayola Experience locations in Orlando and Easton in 2021, and will continue on to the Chandler and Plano venues before culminating at Mall of America in summer 2022. “The collaboration with OceanX exceeded our expectations. We look forward to expanding our relationship with OceanX and announcing additional new brand collaborations for future tours,” said Schorr.

Exploring new directions

With innovation in its past, present and future, Crayola is sketching new ideas and plans all the time. The company itself is creatively alive. Beyond the Crayola Experiences, Crayola has branched out into other areas of LBE. For instance, Crayola collaborated with Mad Science Inc. to create the Crayola Imagine Arts Academy in 2017. The program aims to inspire children through art by developing their creativity and critical thinking through after-school programs, camps, birthday parties and community-based workshops.

Crayola also recently debuted IDEAworX at Philadelphia’s Franklin Institute. While Crayola Experience focuses on creative play, the IDEAworX traveling exhibition encourages families to explore innovation, invention and design thinking. “Ultimately each guest learns about their individual creative style,” said Schorr. Crayola IDEAworX is currently wrapping up its premier run and will shortly be announcing new tour dates and locations.

Schorr indicated that Crayola is going to debut two more experiences soon, which will be new takes on the Crayola brand based on color, creative discovery and art. “What makes Crayola so unique is how diverse and broad the attributes are for the brand. Our strong brand equity allows Crayola and our partners to create whole new experiences, not just different iterations of Crayola Experience,” he said. “Consumers have told us that Crayola as a brand is broadly appealing and encompassing, which gives us a lot of opportunities to expand our offerings while touching the hearts of consumers of all ages.”

Just as creativity can be expressed in different ways, Crayola as a brand can play in multiple ways and through many different concepts and developments for a variety of audiences and venues. “We’re excited about the unique executions Crayola can develop for each of the location-based entertainment industry sectors, and we’re ready to discuss creative ideas with potential partners,” Schorr added. After all, it’s Crayola. Creativity is in the company DNA. • • •

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